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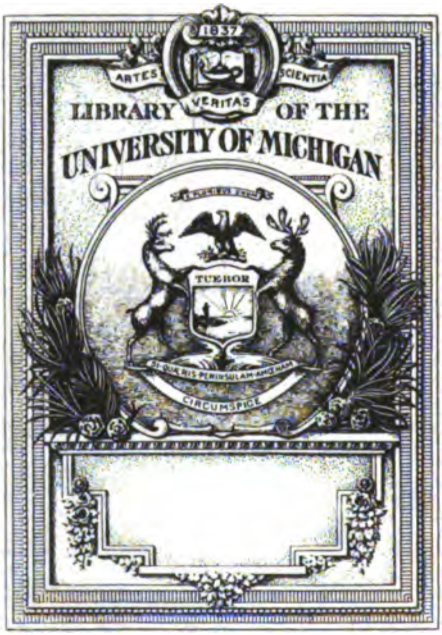

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ELEVENTH BIENNIAL REPORT

OF THE

BUREAU OF LABOR

AND INDUSTRIAL STATISTICS.

STATE OF WISCONSIN

1903-1904.

HALFORD ERICKSON, Commissioner.

J. D. BECK, Deputy.

MADISON
DEMOCRAT PRINTING COMPANY, STATE PRINTER
1904

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LETTER OF TRANSMITTAL.

BUREAU OF LABOR AND
INDUSTRIAL STATISTICS.
MADISON, WIS., September 30, 1904.

To His Excellency HON. R. M. LA FOLLETTE,
Governor of Wisconsin.

DEAR SIR:—I have the honor to transmit herewith the Eleventh Biennial Report of this Bureau as required by the laws of this state.

Very Respectfully Yours,
HALFORD ERICKSON,
Commissioner.

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INTRODUCTION.

In the preparation of this report we have had many difficulties to overcome. The fire which occurred in the State House a few months ago destroyed our office together with its files, material collected and several investigations that were either ready for the report or well under way to completion. Among the investigations thus lost were our "Manufacturing Statistics;" an inquiry into the freight rates charged in this state, and into the earnings and financial condition of the railroads doing business in this state; the course of wholesale and retail prices; the "Domestic service"; "what employers are doing for their employees." In addition to this we also lost a great deal of data relating to the liquor traffic in the state and to tenement conditions in Milwaukee which had been collected during the preceding year.

This accident has proved a serious set back to our work, for it resulted in the total loss of the matter that had been prepared for publication as well as the original data upon which this matter was based. Although we have done our best to make up for the loss we have not been entirely successful. Much of the material which was destroyed cannot from its very nature be fully replaced. The time left for the preparation of the report was also too short for extensive investigations in other lines. The present report is for these reasons less complete and satisfactory than would otherwise have been the case.

In this report considerable space is devoted to factory inspection, or to what has been done in the way of enforcing the factory laws. It includes a fairly complete record of the factories and other places that have been inspected from time to time during the present term, together with a great deal of data relating to the various places inspected as well as to the condition as a whole. In this connection there is an article on some of the economic aspects of factory legislation as well as an article on Sweating which is based on the facts collected at the inspection of the smaller shops and home industries.

The Statistics of Manufactures which has been one of the features of the reports of this Bureau for some years past have been continued in the present report, although not exactly upon the same basis as formerly. In the past these statistics have consisted of comparisons from year to year of the facts collected from identical establishments. But for the present report such comparisons are out of the question. The reason for this is that we have been unable to replace the reports or data for the preceding year which were destroyed in the late fire. The statistics of manufactures presented in this report cover only one year, that of 1903. While the fact that the figures for one year only are included tend to lower the importance of these statistics, but the shortcomings from this source is in a measure made up by the fact that the figures as to earnings and employment in the present report are more complete than in the past. The schedules upon which the original data are collected have been revised. In their present form they require detailed reports upon the rate of wages, hours of labor, and time of employment of every person employed for wages. To obtain even fairly complete returns of this character is a difficult matter. It was made possible in this case by a system of classifying the employees according to the rate of wages and the hours employed. Under this method it is possible to obtain detailed data with little if any more labor than that required to obtain the weekly earnings alone under the old method. Under the former method classified weekly earnings only could be presented. Under the present method it is possible to present in detail the facts as to wages and employment for each person, as well as the classified weekly earnings. It is believed that these changes in our manufacturing statistics will lead to much more satisfactory results all around.

This report also contains a study of the growth of leading industries and their location in this state. This part is based upon the reports of U. S. census and upon data collected by this Bureau. It deals chiefly with the importance and growth of the various industries and with the advantages of location which are offered by the various industrial centers. There has been a rapid development of nearly all the industries in this state and there is a constant demand for information concerning them as well as for the chances of finding favorable locations for new enterprises of various kinds. This part of the report will in a measure serve as a reply to such inquiries, and although it was manifestly out of the question to go into all the details it is hoped that this part will be of some value to those who seek information along such lines.

The last part of this report deals with "Workmen's compensation for industrial accidents," and was prepared by Mr. William Dunton Kerr of Milwaukee. It deals historically and theoretically with the several most important phases of the subject. It is a valuable contribution to the literature of this group of economic questions. It is commendable for the careful, scientific and scholarly manner in which the data is handled.

I take this occasion to call attention to the work of the State Free Employment offices.

Milwaukee Office.—During the past two fiscal years there were 9,676 applications from employers for help or for workers of some sort, and of these the office was able to fill 9,316.

Superior Office.—During the past two fiscal years there were 8,855 applications from employers for help and of these 8,125 were filled.

The offices in Milwaukee and Superior have thus found employment for 17,441 laborers and other workers during the past two years.

About July 1, 1903, under Chapter 434, laws of 1903, a Free Employment Office was established at La Crosse. During the 26 weeks this office has been in operation it received 1,053 requests for labor or for help and secured employment for 868 workers.

About November 1, 1903, a Free Employment Office was also established at Oshkosh. During the six weeks which this office has been in operation it secured employment for 117 persons.

FACTORY INSPECTION.

The meaning of the term "Factory Inspection," the duties of the inspectors and the nature of their work, the scope of the factory laws of this state, the explanation of the various blank forms used by the inspectors, the relation of the department of factory inspection to the bureau of labor and industrial statistics, and to the free employment bureau, are treated in some detail in the last biennial report and will not be repeated here. The last legislature added to the duties of the inspectors by narrowing down the number of officials qualified to issue child labor permits and by changing the method of ascertaining ages of children. This will be explained in greater detail in another part of this report. The last legislature also conferred the power of truancy officers upon the factory inspectors in enforcing the compulsory education law where children under 14 years of age are found working in violation of the child labor law. All this was done without any increase in force of factory inspectors.

The work of inspecting factories and other establishments exclusive of those where cigars are manufactured and shops where garments are made covers a period of eighteen months ending August 30th, 1904. The most important results obtained in this work are presented in tabular form in the following pages. The first table in order presents in detail the entire field covered by the factory inspectors. It shows by cities and villages the name of the firms whose establishments were inspected, the kind of business each firm is engaged in, the number of buildings used by each establishment classified as to height, the total number of employes of each firm or company classified as to sex, the number of children under 16 years of age employed, and, where steam is used as power, the total number of boilers and total horse power used in each establishment. While this table does not include all the cities and villages of the state or the establishments where manufacturing or repairing is done, it includes 173 cities and villages and 3,029 establishments, forming a fairly complete directory of the manufacturing industry of Wisconsin.

The second table is a summary of the first. It presents the manufacturing industries of the state by cities and villages, giving the number of establishments in each place, the total number of buildings classified as to height, the total number of employes classified as to sex, the number of children under 16 years of age employed, and the total number of boilers and total horse power. The table will be of interest as showing the relative importance of the 173 places visited by the inspectors as manufacturing centers.

Following these are numerous other tables and exhibits which treat of hours of labor, wages, safety of machinery, accidents, ventilation and sanitation, elevators, doors and exits, etc., which will be briefly discussed in their turn.

ESTABLISHMENTS INSPECTED.

Location, Name and Business.	Buildings.		Employes.				Boilers.	
	Under 3 stories.	Three or more stories.	Male.	Female.	Total.	Under 16 yrs. of age.	Number.	Total horse power.
ABBOTTSFORD, CLARK CO.—								
Abbottsford Creamery Co., Creamery	1	....	2	....	2	....	1	15
Wisconsin Central Ry. Shops, Car Shops	11	....	42	3	45	....	3	165
Total	12	....	44	3	47	....	4	180
ABRAMS, OCONTO CO.—								
Baldwin & Swobodor, Elevator	1	....	3	....	3	....	....	....
Maple Leaf Creamery, Creamery	1	....	2	....	2	....	1	15
Peters, J. H., Feed Mill	1	....	2	....	2	....	1	30
Total	3	....	7	....	7	....	2	45
ALGOMA, KEWAUNEE CO.—								
Ahnapee Veneer & Seating Co., chairs, etc.	10	2	100	....	100	2	2	220
Algoma Fly Net Co., Fly Nets	1	....	4	....	4	....	....	....
Algoma Packing Co., Canning	6	....	125	70	195	36	2	150
Algoma Water & Light Co., Water & Light	1	....	4	....	4	....	2	160
Guim, Henry, Boxes	3	....	12	....	12	....	1	125
Total	21	2	245	70	315	38	7	655
ANTIGO, LANGLADE CO.—								
Columbia Mfg. Co., Screen Doors, etc.	6	....	35	1	36	1	2	120
Crocker Chair Co., Chairs	2	2	72	....	72	3	3	300
Frost Veneer Seating Co., Veneer	4	....	70	6	76	4	3	240
Kingsbury & Henshaw, Flour	2	1	6	....	6	....	2	170
Mitchel Bros., Saw Mill	1	....	20	....	20	....	1	30
Total	15	3	203	7	210	8	11	860
APPLETON, OUTAGAMIE CO.—								
Appleton Brewing & Malting Co., Brewing, etc.	....	1	15	....	15	....	2	100
Appleton Chair Co., Chairs	1	....	47	....	47	10	2	135
Appleton Crescent, Printing	1	....	8	3	11	1	1	5
Appleton Electric Laundry, Laundry	1	....	4	4	8	....	1	5
Appleton Knitting Co., Knitting	1	....	7	36	43	2	....	....
Appleton Machine Co., Machines	1	....	63	....	63	....	....	....
Appleton Paper & Pulp Co., Pulp	1	....	15	....	15	1	....	....
Appleton Post Publishing Co., Printing	....	1	10	....	10	1	....	....
Appleton Screen Plate Co., Screen Plates	1	....	17	3	20	....	1	10
Appleton Shirt & Pants Co., Shirts & Pants	1	....	2	10	12	....	....	....
Appleton Steam Laundry, Laundry	1	....	5	4	9	....	1	6
Appleton Toy & Furniture Co., Wooden Toys	2	1	43	8	51	29	1	20
Appleton Volksfreund, Printing	1	....	12	....	12	....	....	....
Appleton Waterworks Co., Water	1	....	4	....	4	....	2	200
Appleton Wecker, Printing	1	....	4	1	5	1	....	....
Appleton Wire Works, Wire	2	....	51	8	59	....	2	60
Appleton Woolen Mills, Felt & Yarn	1	1	25	43	68	....	2	225
Atlas Paper Co., Paper	1	....	54	16	70	....	2	400
Brown & Moore Co., Shingles	1	....	25	....	25	....	3	112
Crescent Knitting Co., Knitting	1	....	12	46	58	6	....	....
Eagle Mfg. Co., Machines	1	....	19	....	19	....	....	....
Fairbanks & Timm, Machines	1	....	7	....	7	....	....	....
Fox River Screen Plate Co., Screen Plates	1	....	3	....	3	....	....	....
Fox River Paper Co., Paper	....	3	185	140	325	9	11	1275
Interlake Paper & Pulp Co., Pulp	3	1	123	3	126	3	8	1125
Kimberly-Clark Co., Paper	....	2	84	11	95	....	5	1000
Kurg & Root, Electrical Goods	1	....	7	1	8	....	....	....
Lake Superior Knitting Works, Knitting	....	1	7	18	25	2	....	....
Mauser, Remer & Groef, Planing Mill	3	....	23	....	23	....	1	100
Morston, J. H., Hub & Spoke Co., Hubs, etc.	2	....	15	....	15	....	....	....
Patten Paper Co., Paper	2	1	51	39	90	4	6	630
Post Bindery Co., Bindery	1	....	3	3	6	....	....	....
Post Publishing Co., Printing	1	....	10	....	10	....	....	....

ESTABLISHMENTS INSPECTED.

Location, Name and Business	Buildings.		Employees.				Boilers.	
	Under 3 stories.	Three or more stories.	Male.	Female.	Total.	Under 16 yrs. of age.	Number.	Total horse power.
APPLETON—Continued.								
Remington Watch Co., Watches	1	....	41	72	113	16	1	50
Riverside Fiber Paper Co., Paper	1	....	44	6	50	....	2	650
Riverside Fiber & Pulp Co., Pulp	....	1	118	....	118	1	7	1200
Schroeder, Paul, Marble Works	1	....	7	....	7	....	....	....
Standard Mfg. Co., Bank & Bar Fixtures	3	....	20	....	20	....	1	75
Telula Paper Co., Paper	1	1	78	40	118	1	6	1000
The Atlas Car Mover Co., Car Movers	1	....	2	....	2	....	....	....
The McMurray Packing Co., Canning	2	....	45	38	83	47	4	400
Tuttle Press Co., Printing	1	....	22	8	30	1	....	....
Valley Iron Works, Paper Machines	1	....	64	1	65	....	....	....
Walter, Geo., Estate, Brewery	1	....	16	....	16	....	2	160
Wau Kee, Laundry	1	....	3	....	3	....	....	....
Webster, W. M., & Son, Planing Mill	1	....	3	....	3	....	....	....
Willy & Co., Flour	1	1	12	....	12	....	2	260
Wisconsin Malt & Grain Co., Malt & Grain	1	2	25	....	25	....	2	285
Wisconsin Tissue Paper Co., Paper	1	....	18	6	24	....	1	150
Wisconsin Wire Works, Wire	1	....	18	4	22	....	1	25
Total	55	17	1496	572	2068	136	80	9.65
ARBOR VITAE, VILAS CO.—								
Des Revieres, Geo., Shavings	1	....	8	....	8	2	....	....
Ross Lumber Co., Saw Mill	10	....	225	....	225	3	5	400
Total	11	....	233	....	233	5	5	400
ASHLAND, ASHLAND CO.—								
Ashland Brewing Co., Brewery	3	....	7	1	8	....	2	90
Ashland Daily News, Printing	1	....	8	2	10	....	....	....
Ashland Dye Works, Dye works	1	....	3	....	3	....	1	12
Ashland Iron & Steel Co., Steel Works	91	....	180	....	180	....	15	2550
Ashland Light, Power & St. Ry. Co., Power Plant	3	....	40	....	40	....	4	400
Ashland Lumber Co., Lumber	3	1	150	....	150	....	7	360
Ashland Novelty Co., Box Factory	3	....	40	....	40	6	3	120
Ashland Steam Laundry, Laundry	1	....	4	16	20	....	1	30
Ashland Tile Ware, Tile	1	....	5	....	5	....	....	....
Ashland Water Co., Water	4	....	35	....	35	....	3	700
Barker & Stewart, Lumber	4	1	200	....	200	....	5	500
Bowron, A. W., & Son, Printing	....	1	4	....	4	....	....	....
Bretting, C. G., Mfg. Co., Iron Works	8	....	54	1	55	1	2	100
Chequamegon Critic, Printing	....	1	6	....	6	....	....	....
C. & N. W. Ry. Shops, Car Shops	4	....	60	....	60	....	2	100
Cole Bros., Coal & Wood	1	....	20	....	20	5	....	....
East End Mill, Lumber	3	....	309	1	310	6	7	500
Fahrig Metal Co., Metal Works	1	....	3	....	3	....	....	....
Gallagher & Dyer, Machine Shops	1	....	4	....	4	....	....	....
Garland City Iron Works, Iron Works	1	....	5	....	5	....	1	12
Goodman, Piser & Co., Umbrellas	....	1	5	7	12	....	....	....
Keystone Lumber Co., Lumber	3	1	209	1	210	....	9	1000
Kinkel, Julius, Woodworking	3	....	7	....	7	....	1	60
Lake Superior Lumber Co., Lumber	4	....	75	....	75	....	4	800
Mackie, D. S., Repair Shop	1	....	2	....	2	....	....	....
Minneapolis, St. Paul & Ashland Ry., Shops	2	....	25	....	25	....	1	30
Murray Lumber Co., Lumber	3	1	90	....	90	2	5	500
Pufall, John, Sausage	1	....	3	....	3	....	1	60
Rinehart, Geo. B., Machine Shops	1	....	3	....	3	....	....	....
Sanders, R. E., Foundry	1	....	20	....	20	....	....	....
Scott & Taylor, Woodworking	2	....	30	....	30	....	2	80
Smith, Fred C., Greenhouse	1	....	2	....	2	1	1	10
Trostenson Laundry, Laundry	1	....	1	3	4	....	1	6
Wis. Central Ry. Ore Docks, Ore Docks	1	....	65	....	65	....	....	....
Wis. Central Ry. Shops, Car Shops	2	....	30	....	30	....	1	120
Total	160	7	1704	32	1736	21	79	8140

ESTABLISHMENTS INSPECTED.

Location, Name and Business.	Buildings-		Employes.				Boilers.	
	Under 3 stories.	Three or more stories	Male.	Female.	Total.	Under 16 yrs. of age.	Number.	Total horse power.
ATHENS, MARATHON CO.—								
Alden Printing Co., Printing	1	....	1	1	2	....	....	....
Athens Mfg. Co., Lumber	1	....	75	....	75	....	2	140
Braun & Son, Lumber	2	....	25	....	25	....	1	60
Ceres Roller Mills, Roller Mills	1	1	5	....	5	1	1	80
Degner, H., Heading Mill	1	....	15	....	15	4	1	150
Essleman, H. B., Wagons	1	....	4	....	4	....	....	....
Grunewald, Gust, Wagons	2	....	5	....	5	....	....	....
Paul, Karl, Wagons	1	....	3	....	3	....	1	8
Rietbrock Land & Lumber Co., Lumber	5	....	60	....	60	1	3	40
Total	15	1	193	1	194	6	9	478
BANGOR, LA CROSSE CO.—								
Hussa Brg. Co., Brewery	1	1	9	....	9	....	2	140
Independent, Printing	1	....	1	1	2	....	....	....
Neshoroc Electric Light Co., Power Plant	1	....	1	....	1	....	....	....
Total	3	1	11	1	12	....	2	140
BARABOO, SAUK CO.—								
Altpeter, Oscar, Soda Water	1	....	2	....	2	....	....	....
Baraboo Creamery Co., Creamery	2	....	1	....	1	....	1	30
Baraboo Iron Works, Foundry & Machines	2	....	4	....	4	....	....	....
Baraboo Gas and Elec. Lighting Co., Lt. Plant	3	....	5	....	5	....	2	300
Baraboo Republic, Printing	1	....	4	5	9	....	....	....
Baraboo Steam Dyeworks, Dyeing	1	....	2	1	3	....	1	10
Baraboo Steam Laundry, Laundry	1	....	3	4	7	....	1	15
Baraboo Towel Mills, Towels and Rugs	4	....	17	23	40	....	....	....
Baraboo Water Works, Water	1	....	1	....	1	....	1	90
C. & N. W. Ry. Co., Round-house & Repair S.	9	....	140	1	141	....	2	250
Democrat, Printing	1	....	3	3	6	....	....	....
Effinger, Ferd., Brewery	5	....	7	1	8	....	2	68
Gem Steam Laundry, Laundry	1	....	4	3	7	....	1	15
Gollmar, G. J., Machine Shop	1	....	3	....	3	....	....	....
Graf, H. C., Planing Mill	2	....	2	....	2	....	1	25
Island Woolen Co., Woolen Cloth	5	1	40	40	80	....	1	85
Manchester Roller Mills, Flour & Feed	1	....	2	....	2	....	....	....
McFarland Bros., Contractors & Builders	1	....	4	....	4	....	....	....
Moeller & Sons, Wagons & Carriages	1	....	....	....	....	....	....	....
The News, Printing	1	....	4	5	9	....	....	....
Ruel, Geo. M., Planing Mill	1	....	1	....	1	....	1	80
Ruhland, Geo., Brewery	3	....	5	....	5	....	1	20
Total	48	1	254	86	340	....	15	988
BARKSDALE, BAYFIELD CO.—								
Atlantic Mfg. Co., High Explosives	54	....	75	....	75	....	3	375
BARRON, BARRON CO.—								
Barron Co-operative Creamery Co., Creamery	1	....	2	....	2	....	1	20
Barron Stave & Heading Co., Stave Mill	4	....	25	....	25	5	2	160
Barron Woolen Mill Co., Woolen Mill	2	....	13	14	27	....	....	....
Holtz, C., Wood-working	1	....	10	....	10	....	1	25
Taylor, J. W., Flour Mill	....	1	6	....	6	....	....	....
The Frank F. Stare Co., Canning	3	....	60	15	75	10	2	80
Total	11	1	116	29	145	15	6	285
BAYFIELD, BAYFIELD CO.—								
Bayfield Mill Co., Lumber	2	....	50	....	50	....	4	400
Bayfield Water, Light & Power Co., Works	1	....	5	....	5	....	2	150
Bell, W. H., Wood-working	1	....	5	....	5	....	....	....
Booth, A., & Co., Fish Packers	5	....	30	....	30	....	2	60
Buffalo Fish Co., Fish Packers	1	....	10	....	10	....	....	....
Pike, R. D. Lumber Co., Lumber	6	....	120	....	120	2	6	580
Total	16	....	220	....	220	2	14	1190

ESTABLISHMENTS INSPECTED.

Location, Name and Business.	Buildings.		Employes.				Boilers.	
	Under 3 stories.	Three or more stories.	Male.	Female.	Total.	Under 16 yrs. of age.	Number.	Total horse power.
BEAVER DAM, DODGE CO.—								
American Steam Laundry, Laundry	1	....	2	3	5	....	1	12
Beaver Dam Brewery, Brewery	3	....	5	....	5	....	....	....
Beaver Dam Gas Co., Gas	1	....	5	....	5	....	....	....
Beaver Dam Gas Engine Works, Plant	1	....	6	....	6	....	....	....
Beaver Dam Illuminating Co., Plant	1	....	5	....	5	....	2	200
Beaver Dam Malleable Iron Co., Works	6	....	250	....	250	18	2	200
Beaver Dam Overall Factory, Overalls	1	....	2	4	6	....	....	....
Binzel, Phil., Brewery	3	....	5	....	5	....	1	20
Empire Mills, Flour	1	1	5	....	5	....	1	100
Malleable Iron Range Co., Stoves	2	....	85	5	90	....	1	65
Miller, J. W., Marble Works	1	....	6	....	6	....	....	....
Rissman's Elevator, Grain Elevator	1	....	7	....	7	....	....	....
Rowell, J. S., Mfg. Co., Agricultural Imp.	7	1	139	1	140	....	1	125
Williams, T. F., Grain Elevator	1	....	3	....	3	....	....	....
Woolen Mfg. Co., Woolen Mills	3	1	40	80	120	13	2	175
Total	33	3	565	93	658	31	11	897
BELDENVILLE, PIERCE CO.—								
Beldenville Creamery Co., Creamery	1	....	2	....	2	....	1	12
Brimmer, W. D., Heading Mill	3	....	18	....	18	1	1	80
Junkman, H. O., Grain Elevator	1	....	3	....	3	....	....	....
Larson Bros., Lumber	1	....	60	....	60	....	....	....
Total	6	....	83	....	83	1	2	92
BELOIT, ROCK CO.—								
Barrett Mfg. Co., Paper Mills	2	....	39	1	40	....	6	480
Beloit Carriage Co., Carriages	2	....	10	....	10	....	1	6
Beloit Electric Light & Power Co., Plant	1	....	12	....	12	....	2	350
Beloit Gas Light Co., Plant	1	....	8	....	8	....	1	25
Beloit Glove & Mitten Co., Factory	1	....	10	10	20	....	....	....
Beloit Iron Works, Plant	2	....	160	....	160	1	2	160
Beloit Sanitary Milk Co., Creamery	1	....	3	....	3	....	1	15
Beloit Steam Laundry, Steam Laundry	1	....	3	7	10	....	1	30
Beloit Water Works, Plant	2	....	5	....	5	....	3	250
Berlin Machine Works, Plant	2	1	545	15	560	....	3	460
Besley, C. H., Tools	1	....	50	....	50	5	....	....
Blodgett Milling Co., Elevator	1	....	2	....	2	....	....	....
City Mills, Feed	1	....	3	....	3	....	....	....
Crahen, P. H., Tobacco Warehouse	1	....	13	22	35	....	....	....
Cunningham Bros., Sash & Doors	1	....	65	....	65	....	....	....
Dowd, R. J., & Son, Knives	3	....	19	1	20	....	1	80
Eureka Laundry, Laundry	1	....	4	9	13	....	....	....
Fairbanks, Morse & Co., Pumps	17	....	1448	4	1452	24	6	850
Ferguson Bros., Wagons	1	....	7	....	7	....	....	....
Foster, J. A., Box Factory	....	1	3	3	6	1	....	....
Foster Co., The John, Shoes	1	....	90	60	150	3	2	95
Freiday & Mills, Machines	1	....	3	....	3	....	....	....
Gaston, N. B., & Son, Scales	....	1	40	....	40	....	....	....
Goddard & Allen Co., The, Bicycles	1	....	8	....	8	....	....	....
Johnson & Reese, General Repairing	2	....	4	....	4	....	....	....
Leonard, H. J., Mfg. Co., Gloves	1	....	6	24	30	....	....	....
Mattison, C., Machinery	1	....	10	....	10	....	....	....
Mead, A., Elevator	1	....	2	....	2	....	1	25
Munger, A. L., Carriages	1	....	4	....	4	....	....	....
Newton & Zimmerman, Machine Shops	1	....	20	....	20	....	....	....
Pierce, M. C., Specialty Co., Specialties	1	....	3	1	4	....	....	....
Rockford, Beloit & Janesville Mfg. Co., Power House	1	....	10	....	10	....	3	1050
Rosenblatt, H., & Son, Clothing	3	....	25	100	125	5	....	....
Sanner & Hanewall, Machinery	2	....	3	....	3	....	....	....
Schlenk, Frank, Brewery	1	....	3	....	3	....	1	10
Star Mill, Feed Mill	1	....	3	....	3	....	....	....
Stockwell, F. C., Printing	1	....	2	....	2	....	....	....

ESTABLISHMENTS INSPECTED.

Location, Name and Business.	Buildings.		Employes.				Boilers.	
	Under 3 stories.	Three or more stories.	Male.	Female.	Total.	Under 16 yrs. of age.	Number.	Total horse power.
BELOIT—Continued.								
Thompson, J., & Sons Mfg. Co., Farm Mach.	1	....	200	....	200	....	3	200
Thorsby & Sanner, Machines	1	....	3	....	3	....	....	....
Warner, C. O., Wood-work	1	....	3	....	3	....	....	....
Warner Ins. Co., Machines	1	....	4	1	5	....	....	....
Total	66	3	2855	258	3113	37	37	4086
BENTON, LAFAYETTE CO.—								
Hoskins Mining Co., Mining	5	....	65	....	65	....	2	250
Kennedy Mining Co., Mining	4	4	33	....	33	....	4	200
Rowley Mining Co., Mining	3	....	19	....	19	....	1	80
Total	12	4	117	....	117	....	7	530
BLACK RIVER FALLS, JACKSON CO.—								
Badger State Banner, Printing	1	....	6	....	6	....	....	....
Bright & Bailey, Feed Mill	1	....	1	....	1	....	....	....
City Electric Light Co., Lighting	1	....	3	....	3	....	....	....
City Water Works Co., Water	1	....	1	....	1	....	1	80
Charter Oak Milling Co., Flour	1	....	4	....	4	....	....	....
Dunn, John S., Elevator	2	....	2	....	2	....	....	....
Jackson Co. Journal, Printing	1	....	3	....	3	....	....	....
Marracony, C. W., Flour	1	....	3	....	3	....	....	....
Mathron, M. B., Co., Wagons	2	....	10	....	10	....	....	....
McGillivary, J. J., Lumber, etc.	3	....	15	....	15	....	....	....
Mower, C. E., Creamery	2	....	1	....	1	....	1	12
Oderbolz Brewing Co., Brewery	4	1	3	....	3	....	1	18
Paschman, J. L., Elevator	1	....	1	....	1	....	....	....
Olson, P. R., Wagons	1	....	3	....	3	....	....	....
Thompson Iron Works, Machine and Foundry	5	....	6	....	6	....	....	....
Total	27	1	62	....	62	....	3	110
BOSCOBEL, GRANT CO.—								
Albeiter, M., Wagons, etc.	3	....	5	....	5	....	....	....
Bekkedahl, M. E., Tobacco Warehouses	1	....	10	75	85	....	....	....
Bock, F. E., Soda Water	1	....	2	1	3	....	1	2
Boscobel Brewing Co., Brewery	3	2	4	....	4	....	1	20
Boscobel Light & Power Co., Light, etc.	1	....	2	....	2	....	2	160
Boscobel Sentinel, Printing	1	....	5	1	6	....	....	....
Botten, L. P., Wagon Mfg.	1	....	3	....	3	....	....	....
Dial Enterprise, Printing	1	....	4	1	5	....	....	....
North & Dilger, Flour and Feed	1	1	3	....	3	....	1	60
Ruka Bros. Mfg. Co., Wagons and Buggies	3	....	20	....	20	....	1	40
Rustic Novelty Works, Rustic Chairs	1	....	3	....	3	....	1	4
Total	17	3	61	78	139	....	7	286
BREED, OCONTO CO.—								
Greely, S., Sawmill	1	....	10	....	10	....	1	60
BRODHEAD, GREEN CO.—								
Brodhead Register, Printing	1	....	2	2	4	....	....	....
Brodhead Steam Laundry, Laundry	1	....	1	2	3	....	....	....
Holliday, Frank, Machine Shops	1	....	1	....	1	....	....	....
Pierce Bros., Flour and Feed	1	....	3	....	3	....	....	....
The Brodhead Independent, Printing	....	1	3	2	5	1	....	....
The Brodhead Electric Light Co., Lighting	1	....	2	....	2	....	....	....
Vehling, T. O. & Co., Creamery	2	....	2	....	2	....	1	20
Total	7	1	14	6	20	1	1	20
BROKAW, MARATHON CO.—								
Wausaw Paper Mill, Paper and Pulp	11	....	192	8	200	....	....	....

ESTABLISHMENTS INSPECTED.

Location, Name and Business.	Buildings.		Employes.				Boilers.	
	Under 3 stories.	Three or more stories.	Male.	Female.	Total.	Under 16 yrs. of age.	Number.	Total horse power.
BROOKLYN, GREEN CO.—								
Brooklyn Creamery Co., Creamery	1	....	2	....	2	....	1	15
Capital Chair Co., Chairs	2	1	25	....	25	....	1	150
Green, J. L. & M. F., Tobacco Warehouse	1	....	18	12	30	....	....	....
Richards, Graves & Roberts, Elevator	1	....	4	....	4	....	....	....
Total	5	1	49	12	61	....	2	165
BUSHMAN—								
Bushman, G. H., Cheese Factory	1	....	2	....	2	....	1	14
BURLINGTON, RACINE CO.—								
Burlington Blanket Co., Blankets	8	1	40	110	150	....	2	100
Burlington Brass Works, Brass	2	....	9	....	9	1	1	25
Burlington Electric Light & Power Co., Light & Power	5	....	5	....	5	....	2	180
Burlington Free Press, Printing	1	....	3	....	3	....	....	....
Burlington Steam Laundry, Laundry	1	....	1	3	4	....	1	10
City Water Works, Water	1	....	1	....	1	....	2	100
Finke & Uhen Brewing Co., Brewery	5	3	14	....	14	....	3	195
Klein, F. G., Bottling	6	....	10	....	10	....	1	25
Standard Democrat, Printing	1	....	3	....	3	....	....	....
Wisconsin Condensed Milk Co., Condensed Milk	5	1	43	7	50	....	6	400
Zwiebel, A., Jr., Machinery	1	....	6	....	6	1	1	40
Total	36	5	135	120	255	2	19	1075
CAMERON, BARRON CO.—								
Breitenbach, J. A., Creamery	1	....	2	....	2	....	1	15
Hessell, H., Bottling	1	....	2	....	2	....	....	....
Oak Grove Handle Co., Factory	1	....	10	....	10	....	1	60
St. Louis, G. H., Repair Shop	1	....	3	....	3	....	....	....
Total	4	....	17	....	17	....	2	75
CARROLLVILLE, MILWAUKEE CO.—								
Lake Side Distilling Co., Distilling	5	1	22	....	22	....	9	700
U. S. Glue Co., Glue	15	2	146	29	175	5	4	1600
Total	20	3	168	29	197	5	13	2300
CEDARBURG, OZAUKEE CO.—								
Cedarburg Wire Nail Co., Wire Nails	....	1	10	....	10	....	1	25
Cedarburg Woolen Mills, Woolen Goods	2	1	60	38	98	26	3	200
Excelsior Shoe & Slipper Co., Shoes	1	....	40	10	50	6	1	25
Hilgen Mfg. Co., Sash & Doors	6	1	45	....	45	....	2	100
Total	9	3	155	48	203	32	7	350
CHILTON, CALUMET CO.—								
Chilton Malting Co., Elevator	1	2	7	....	7	....	2	120
Dorschal & Schultz, Sash & Doors	1	....	15	....	15	....	1	80
Gierow & Hoch, Brewery	2	....	10	....	10	....	1	41
Jackman, L., Elevator	....	1	7	....	7	....	....	....
Knauff & Tiesch, Elevator	....	1	3	....	3	....	....	....
Total	4	4	42	....	42	....	4	241
CHIPPEWA FALLS, CHIPPEWA CO.—								
Bresina, John, Wagons	1	....	4	....	4	....	....	....
Brooks, H. L., Marble Works	1	....	3	....	3	....	....	....
Chippewa Falls B. & B. Co., Brooms, etc.	1	....	8	....	8	....	....	....
Chippewa Falls Canning Co., Canning	4	....	45	20	65	....	2	60
Chippewa Falls El. Lt. & P. Co., Lt. & Water	4	....	12	....	12	....	3	175

ESTABLISHMENTS INSPECTED.

Location, Name and Business.	Buildings.		Employes.				Boilers.	
	Under 3 stories.	Three or more stories.	Male.	Female.	Total.	Under 16 yrs. of age.	Number.	Total horse power.
CHIPPEWA FALLS—Continued.								
Chippewa Falls Woolen Mills, Woolen Goods	1	....	7	8	15	....	1	60
Chippewa Lumber & Boom Co., Mill	6	1	450	....	450	....	4	450
Chippewa Shoe Mfg. Co., Factory	1	....	25	4	29	....	....	....
Chippewa Spring Co., Bottling	1	....	5	....	5	....	1	12
Chippewa Standard Made Boot & Shoe Co., Boots & Shoes	1	....	43	7	50	....	....	....
Chippewa Steam Laundry, Laundry	1	....	3	13	16	....	1	12
Chippewa Valley Creamery Co., Creamery	1	....	4	....	4	....	....	....
City Marble Works, Monuments	1	....	2	....	2	....	....	....
Clark & Taylor, Elevators	2	....	5	....	5	....	....	....
Consolidated Mill'g & Power Co., Mill Elevator	1	1	10	....	10	....	....	....
Daily Independent, Printing	1	....	5	6	11	....	....	....
Felber & Misfeldt, Wagons	1	....	6	....	6	....	....	....
Hand Made Boot & Shoe Co., Boots & Shoes	1	....	25	10	35	....	....	....
Harshman Shoe Mfg. Co., Shoes	....	1	95	40	135	6	....	....
Herald, Printing	1	....	6	4	10	....	....	....
Joas, Frank, Shirts	1	....	1	3	4	....	....	....
Leinenkugel, J., Brewing Co., Brewery	1	2	20	....	20	....	2	90
Panmir, E. G., Wagons	1	....	6	....	6	....	....	....
South Side Mfg. Co., Sash & Doors	....	1	41	1	42	....	1	45
Stanley, F. G. & C. A., Mfg. Co., Sash & Doors	4	....	45	1	46	5	3	95
Theriault, J. B., Brickyard	2	....	30	....	30	....	2	55
Tilden Roller Mills, Flour	....	1	3	....	3	....	....	....
Total	40	7	909	117	1026	11	20	1054
CLINTONVILLE, WAUPACA CO.—								
Kachan & Beslerdich, Machinists	1	....	6	....	6	....	1	60
Melzer, Wm., Monuments	1	....	3	....	3	....	....	....
Pigeon River Creamery Co., Creamery	1	....	1	....	1	....	1	20
Rohrer, D. J., Sash & Doors	1	....	10	....	10	....	1	65
Roehr, L., Planing Mill	4	....	20	....	20	....	2	100
Total	8	....	40	....	40	....	5	245
COLFAX, DUNN CO.—								
Colfax Mgf. Co., Mill	1	....	3	....	3	....	1	50
Colfax Starch Co., Factory	2	....	25	....	25	....	1	50
Horner & Olson, Feed	1	....	2	....	2	....	1	25
Lister, Wm., Stairs	1	....	50	....	50	....	....	....
Northern Grain Co., Elevators	2	....	3	....	3	....	....	....
Total	7	....	83	....	83	....	3	125
COLUMBUS, COLUMBIA CO.—								
City Water & Light Co., Water & Light	2	....	3	....	3	....	2	160
Columbus Canning Co., Canning	2	....	20	20	40	....	2	120
Columbus Democrat, Printing	1	...	2	....	2	....	....	....
Columbus Mill, Flour & Feed	1	1	3	....	3	....	2	70
Columbus Republican, Printing	1	....	3	....	3	....	....	....
Columbus Steam Laundry, Laundry	1	....	2	6	8	....	1	15
Kurth, John H., Elevator	1	1	2	....	2	....	....	....
Roberts & Thied, Repair Shop	1	....	5	....	5	....	....	....
The Kurth Co., Brewery	7	5	30	2	32	....	2	300
Total	17	7	70	28	98	....	9	665
CORLISS, RACINE CO.—								
Brown Corliss Engine Co., Engines	8	....	200	....	200	....	2	300
CRANDON, FOREST CO.—								
Crandon Mfg. Co., Hubs	3	....	20	....	20	....	2	100
Hagen, Chas., Saw Mill	2	....	45	....	45	....	1	60
Kempf, Geo. & Bro., Planing Mill	1	....	18	....	18	....	1	40
Mills, Wm., Heading	3	....	20	....	20	2	2	120
Moe, J. S., Broom Handles	1	....	12	....	12	....	1	50
Page & Landeck Lumber Co., Lumber	2	....	350	....	350	....	3	240
Total	12	....	465	....	465	2	10	610

ESTABLISHMENTS INSPECTED.

Location, Name and Business.	Buildings.		Employes.				Boilers.	
	Under 3 stories.	Three or more stories.	Male.	Female.	Total.	Under 16 yrs. of age.	Number.	Total horse power.
CUDAHY, MILWAUKEE CO.—								
Cudahy Bros. Co., Packing House	10	7	1015	15	1030	36	16	3000
Milwaukee Rubber Works, Rubber Goods	4	....	37	3	40	2	2	150
Power & Mining Machine Co., Machinery	9	1	321	4	325	....	3	350
Reinhart, F. C., Cooperage	2	....	20	....	20	....	....	....
Total	25	8	1393	22	1415	38	21	3500
DARLINGTON, LAFAYETTE CO.—								
Badger State Mineral Water Co., Min. Water	1	....	2	....	2	....	....	....
Darlington Cheese & B. Co., Cheese & Butter	2	....	2	....	2	....	1	20
Darlington E. L. & W. Pow. Co., E. L. & W.	3	....	3	....	3	....	1	150
Darlington Light & Power Button Dept., Buttons	1	....	23	....	23	....	....	....
Sauer, A. E., Feed Mill	1	....	1	....	1	....	1	20
Total	8	....	31	....	31	....	3	190
DELAVAN, WALWORTH CO.—								
Delavan City Water Works, Water	1	....	1	....	1	....	2	140
Delavan Enterprise, Printing	1	....	4	4	8	....	....	....
Delavan Light & Fuel Co., Lighting	2	....	3	....	3	....	2	150
Delavan Milling Co., Flour & Feed	....	1	3	....	3	....	....	....
Delavan Republican, Printing	1	....	6	2	8	....	....	....
Delavan Steam Laundry, Laundry	1	....	2	4	6	....	1	20
Globe Knitting Mills, Woolen Goods	2	....	20	45	65	1	....	....
Hoag, N. W., Grain & Feed	3	....	2	....	2	....	1	35
Reader, J. B., Wind Mills & Tanks	3	....	4	....	4	....	1	20
Wagner Bros., Machinery	4	....	3	....	3	....	1	15
West End Creamery, Creamery	1	....	1	....	1	....	1	15
Total	19	1	49	55	104	1	9	395
DE PERE, BROWN CO.—								
American Writing Paper Co., Paper	1	1	139	136	275	18	4	700
Burns Boiler Mfg. Co., Boilers	6	....	79	1	80	....	....	....
Dausman, J. P., Milling Co., Milling	2	1	20	....	20	1	....	....
De Pere Light & Power Co., Light & Power	1	....	5	....	5	....	....	....
De Pere Lumber & Fuel Co., Planing Mill	1	....	18	....	18	....	1	100
De Pere Pickle Co., Pickling	1	....	3	....	3	....	....	....
Hockers, John, Brickyard	7	....	25	....	25	2	....	....
Kidney & Son, Boats	1	....	12	....	12	....	1	25
Oneida Knitting Co., Knitting	1	....	1	35	36	....	....	....
Sam Wing, Laundry	1	....	1	....	1	....	....	....
Shattuck & Babcock	7	2	130	140	270	....	....	....
The A. G. Wells Co., Elevator	2	1	15	....	15	....	....	....
The De Pere News, Printing	1	....	3	1	4	....	....	....
The De Pere Tablet Co., Tablets	1	....	1	2	3	....	....	....
The C. A. Lawton Co., Machine Shops	1	....	40	....	40	....	2	75
Total	34	5	452	315	767	21	8	900
DODGEVILLE, IOWA CO.—								
Dodgeville Electric Lt. Co., Electric Lights	5	....	2	....	2	....	1	140
Draper, R. A., Laundry	2	....	1	3	4	....	1	20
Esch, Wm. P., Butter Tubs	1	....	1	....	1	....	....	....
Johns, John, Flour & Feed	1	1	2	....	2	....	1	40
Mitchell, Griffiths & Co., Creamery	5	....	2	....	2	....	1	20
Stratman, F. W., Wagons & Carriages	2	....	20	....	20	....	1	30
Total	16	1	28	3	31	....	5	250
DORCHESTER, CLARK CO.—								
Dorchester Roller Mills, Flour	....	1	3	....	3	....	1	45
Ellingson, E. K., Lumber	3	....	30	....	30	....	3	140
Total	3	1	33	....	33	....	4	195

ESTABLISHMENTS INSPECTED.

Location, Name and Business.	Buildings.		Employes.				Boilers.	
	Under 3 stories.	Three or more stories.	Male.	Female.	Total.	Under 16 yrs. of age.	Number.	Total horse power.
DRUMMOND, BAYFIELD CO.—								
Rust-Owen Lumber Co., Lumber	7	1	200	....	200	....	7	1450
EAU CLAIRE, EAU CLAIRE CO.—								
Acme Mills, Feed	....	1	3	....	3	....	1	50
Ashbaugh & Wiley, Printing	1	....	3	....	3	....	....	....
Bergman & Craemer, Feed	2	....	3	....	3	....	....	....
Bonell & Son, Wagons	2	....	17	1	18	....	....	....
Cheney, C. W. & Co., Elevator	1	....	5	....	5	....	....	....
Chippewa Valley Elec. Ry. Co., The P. H.	2	....	3	....	3	....	2	300
City Laundry, Laundry	1	....	11	49	60	....	1	50
Cutter, A. A., Shoes	1	....	65	15	80	....	....	....
Davis, W. J., Elevator	1	....	7	1	8	....	1	25
Dells Lumber & Shingle Co., Lumber, etc.	2	....	280	....	280	....	7	350
Dells Paper & Pulp Co., Paper Mills	13	6	335	15	350	....	7	1500
Drummond Bros., Packing House	12	1	50	....	50	....	1	50
Eau Claire Bedding Co., Bedding	2	....	4	1	5	....	....	....
Eau Claire Boiler Works, Boilers	1	....	10	....	10	....	....	....
Eau Claire Book & Stationery Co., Printing	1	....	6	4	10	....	....	....
Eau Claire Book Bindery, Book Binding	1	....	2	1	3	....	....	....
Eau Claire B. & B. Co., Brooms & Brushes	1	....	3	....	3	....	....	....
Eau Claire Gas Light Co., Gas	2	....	5	....	5	....	1	40
Eau Claire Gran. & Marble Wks., Monuments	1	....	3	....	3	....	....	....
Eau Claire Linen Mills, Linens	1	1	6	44	50	....	....	....
Eau Claire Mill Supply Co., Loggers' Supplies	3	....	18	....	18	....	....	....
Eau Claire Robe & Fur Tannery, Tannery	1	....	2	1	3	....	....	....
Eau Claire Steam Dye Works, Dyeing	....	1	2	....	2	....	1	10
Eau Claire Steam Laundry, Laundry	1	....	5	....	5	....	1	12
Eau Claire Trunk Co., Trunks	1	....	14	3	17	1	....	....
Evening Telegram, Printing	....	1	10	5	15	1	....	....
Fish, E. M. & Co., Sash & Doors	4	....	49	1	50	2	1	50
Giranu, P. & Co., Carriages	2	....	11	....	11	....	....	....
Half Moon Lake Shingle Co., Mill	4	....	50	....	50	2	6	360
Hawley, J. D., Shop	1	....	2	....	2	....	....	....
Herold, Printing	1	....	3	1	4	....	....	....
Hoeppner, Bartlett & Co., Wood Working	6	....	65	....	65	....	....	....
Kurven Dress Stay Co., Dress Stays	1	....	2	8	10	....	....	....
Lake Side Elevator Co., Feed Mill	2	....	4	....	4	....	1	50
Lange Canning Co., Canning	4	1	90	90	180	33	2	150
Larson, C. P., Shoes	1	....	15	15	30	....	....	....
Lee, C. S., Fuel	1	....	5	....	5	....	....	....
Lindeman Box & Veneer Co., Boxes, etc.	5	....	120	....	120	36	2	100
Luffkin, G. W., Produce	1	1	34	12	46	14	....	....
Madison Street Mfg. Co., Wood working	2	....	20	....	20	....	....	....
McDonough Mfg. Co., Iron	4	....	97	1	98	....	....	....
McDonough Novelty Co., Wood Working	2	....	15	....	15	....	....	....
Meadee, R. L., Candy	1	....	10	18	28	....	....	....
Michel's Brewery, Brewery	2	....	8	....	8	....	1	20
Phoenix Furniture Co., Furniture	1	....	50	....	50	....	1	80
Phoenix Mfg. Co., Lumber	10	....	83	2	85	....	1	100
Pioneer Furniture Co., Furniture	1	2	119	1	120	14	2	200
Quong Kee, Laundry	1	....	2	....	2	....	1	3
Reform, Printing	1	....	4	3	7	....	....	....
Richardson, G., Monuments	1	....	4	....	4	....	....	....
Schneider & Heinz, Carriages	1	....	5	....	5	....	....	....
Schroeder, W. A., Harness	1	....	5	....	5	....	....	....
Shaw-Daniels Lumber Co., Lumber	9	....	280	....	280	....	8	1000
Tifft & Co., J. H., Printing	1	....	5	4	9	....	....	....
Volkman, Chris, Bottling Works	1	....	3	....	3	....	....	....
Walters, John, Brewery,	2	1	16	....	16	....	1	100
Water Works, Pumping	2	....	5	....	5	....	3	350
Wisconsin Refrigerator Co., Refrigerators	5	....	65	....	65	....	2	160
Total	135	16	2118	296	2414	103	55	5110

ESTABLISHMENTS INSPECTED.

Location, Name and Business.	Buildings.		Employes.				Boilers.	
	Under 3 stories.	Three or more stories.	Male.	Female.	Total.	Under 16 yrs. of age.	Number.	Total horse power.
EDGERTON, ROCK COUNTY—								
American Cigar Co., Tobacco Warehouse	2	....	65	75	140	....	....	....
Brill, Wm., Tobacco Warehouse	1	....	10	20	30	....	....	....
Buncel, Jo & Sons, Tobacco Warehouse	2	....	53	47	100	2	....	....
Burges, F. F., Gun Shop	1	....	2	....	2	....	....	....
City Steam Laundry, Laundry	1	....	2	1	3	....	....	....
Child, H. W., Tobacco Warehouse	1	....	20	55	75	8	....	....
Conway & Hubbell, Tobacco Warehouse	1	....	40	40	80	....	....	....
Coon & Atwood, Tobacco Warehouse	1	....	20	15	35	....	....	....
Culton, Charles L., Tobacco Warehouse	1	....	6	14	20	....	....	....
Earle, T. B., Tobacco Warehouse	1	....	40	....	40	1	....	....
Edgerton Eagle, Printing	1	....	2	1	3	....	....	....
Eisenlohr, Otto & Bro., Tobacco Warehouse	1	....	25	50	75	....	....	....
Ellingson, T. H., Tobacco Warehouse	1	....	20	10	30	1	....	....
Fischer & Leary, Tobacco Warehouse	1	....	5	25	30	....	....	....
Ford & Kellogg, Tobacco Warehouse	1	....	20	10	30	1	....	....
Heddles Lumber Co., Feed Mill	2	....	1	....	1	....	....	....
Jensen, Andrew, Tobacco Warehouse	1	....	30	50	80	....	....	....
Mabbitt, C. F., Tobacco Warehouse	2	....	54	36	90	1	....	....
Marsdon & Watson, Machine Shops	1	....	5	....	5	....	....	....
McIntosh Bros., Tobacco Warehouse	1	....	15	35	50	2	....	....
Peavy, T. A., Tobacco Warehouse	1	....	20	....	20	....	....	....
Pomeroy, O. R., Tobacco Warehouse	1	....	5	15	20	....	....	....
Pomeroy, W. T. & Co., Tobacco Warehouse	1	....	30	....	30	....	....	....
United Cigar Mfg. Co., Tobacco Warehouse	1	....	80	70	150	....	....	....
Wettit Bros., Tobacco Warehouse	1	....	5	....	5	....	....	....
Whitter Bros., Brickyard	6	....	25	....	25	....	1	60
Wilson Bros., Laboratory	....	2	14	5	19	....	....	....
Wisconsin Tobacco Reporter, Printing	1	....	4	....	4	....	....	....
Total	36	2	618	574	1192	15	1	60
ELCHO, LANGLADE CO.—								
Fish & Mullen, Lumber	3	....	35	....	35	....	3	150
ELKHORN, WALWORTH CO.—								
Blade, Printing	1	....	1	....	1	....	....	....
Elkhorn Carriage & Wagon Co., Carriages & Wagons	5	....	12	....	12	....	1	16
Elkhorn Independent, Printing	....	1	3	5	8	....	....	....
Elkhorn Lumber Co., Feed Mill	2	1	1	....	1	....	1	20
Elkhorn Steam Laundry, Laundry	1	....	1	2	3	....	1	10
Elkhorn Water & Light Co., Water & Light	1	....	3	....	3	....	2	150
Frates, Geo., Tanks, etc.	1	....	2	....	2	....	1	25
Wisconsin Butter & Cheese Co., Creamery	1	....	5	....	5	....	1	30
Zwiebel & Griebel, Repairs	3	....	5	....	5	....	1	30
Total	15	2	33	7	40	....	8	281
ELKMOUND, DUNN CO.—								
Cargill, W. W.	1	1	1	....	....	....	....	....
Elkmound Creamery Co., Creamery	1	....	2	....	2	....	1	20
Wisconsin Elevator Co., Elevator	1	....	2	....	2	....	....	....
Total	3	....	5	....	5	....	1	20
ELLSWORTH, PIERCE CO.—								
Buck Bros., Light & Water	1	....	3	....	3	....	1	150
Ellsworth Brewing Co., Brewery	1	....	2	....	2	....	1	40
Ellsworth Iron Works, Iron	1	....	3	....	3	....	....	....
Ellsworth Mfg. Co., Mill	2	....	16	....	16	....	....	....
Ellsworth Roller Mills, Mills	1	1	4	....	4	....	1	50
Herald, Printing Co.	1	....	2	1	3	....	....	....
Hines, F. W., Elevator	1	....	4	....	4	....	....	....
Milborn Dairy Co., Creamery	1	....	2	....	2	....	1	20
New Richmond Roller Mills, Flour	2	....	2	....	2	....	....	....
Record, Printing	1	....	2	1	3	....	....	....
Weitgal, J., Wagons	1	....	3	....	3	....	....	....
Total	13	1	43	2	45	....	4	260

ESTABLISHMENTS INSPECTED.

Location, Name and Business.	Buildings.		Employes.				Boilers.	
	Under 3 stories.	Three or more stories.	Male.	Female.	Total.	Under 16 yrs. of age.	Number.	Total horse power.
EVANSVILLE, ROCK CO.—								
Baker Mfg. Co., Windmills	5	....	134	1	135	....	2	225
Baldwin, L. A., Feed Mill	1	....	3	....	3	....	....	....
Barnard & Wilder, Tobacco Warehouse	1	....	8	32	40	....	....	....
Brand, John & Co., Tobacco Warehouse	1	....	17	28	45	....	....	....
Calony, O. C., & Co., Tobacco Warehouse	1	....	22	14	36	....	....	....
Evansville Steam Laundry, Laundry	1	....	1	5	6	....	1	10
Evansville Water & Light Co., Water, etc.	1	....	3	....	3	....	2	220
Morgan, J. W., Repairs, Wagons	1	....	3	....	3	....	....	....
Rumville, G. H., Tobacco Warehouse	1	....	17	23	40	....	....	....
Wood, D. E., Butter Co., Creamery	1	....	25	....	25	....	4	225
Total	14	....	233	103	336	....	9	680
FIFIELD, PRICE CO.—								
Ocker, Henry, Lumber	1	....	10	....	10	....	2	45
FOND DU LAC, FOND DU LAC CO.—								
Abel Bros., Machine Shops	1	....	2	....	2	....	....	....
Abel, T. W., Machine Shops	1	....	1	....	1	....	....	....
American Chemical Co., Patent Medicine	1	....	2	3	5	....	....	....
Badger Book Binding Co., Bindery	1	....	1	1	2	....	....	....
Badger Envelope Co., Envelopes	1	....	4	3	7	....	....	....
Badger Sewing Co., Overalls, etc.	3	....	12	126	138	4	....	....
Badger Suspender Co., Suspenders	....	1	1	2	3	....	....	....
Bechaud Brewing Co., Brewery	7	2	8	....	8	....	2	175
Bonloy Bros., Feed Mill	3	1	4	....	4	....	....	....
Bowen Mfg. Co., Refrigerators	4	1	75	....	75	....	3	160
Bulletin Printing Co, Printing	....	1	6	2	8	....	....	....
Cargles, W. W., Elevator	....	1	2	....	2	....	....	....
Clark Mfg. Co., Gas Engines	2	....	3	1	4	....	....	....
Courier Printing House, Printing	....	1	3	2	5	....	....	....
Eastern Wisconsin Ry. Light Co., Gas Plant	4	....	10	....	10	....	....	....
Eastern Wisconsin Ry. Light, Power House	2	....	66	4	70	....	2	100
Engel, A., & Son, Bottling	1	....	3	....	3	....	....	....
Eureka Steam Laundry, Laundry	....	1	3	9	12	....	1	20
Fond du Lac Awning & Tent Co., Awnings	1	2	5	17	22	....	....	....
Fond du Lac Boiler Works, Boilers	1	....	5	....	5	....	....	....
Fond du Lac Canning Co., Canning	3	....	50	....	50	....	3	100
Fond du Lac File Works, Files	2	....	2	....	2	....	1	35
Fond du Lac Implement Co., Machinery	4	....	10	1	11	....	1	40
Fond du Lac Malt & Grain Co., Malt House	4	3	10	....	10	....	1	200
Fond du Lac Shirt & Overall Co., Shirts, etc.	1	....	9	75	84	2	....	....
Fond du Lac Steam Laundry, Laundry	1	....	6	18	24	....	1	30
Fond du Lac Table Mfg. Co, Tables	7	....	48	....	48	4	2	250
Moore & Galloway Lumber Co., Lumber	1	....	17	....	17	2	3	350
Moore & Galloway Lumber Co., Sash & Doors	1	....	125	....	125	4	6	500
Reupeng, F., Leather Co., Tannery	1	2	275	....	275	7	5	500
Steenberg, O. C., Co., Sash, Doors & Blinds	....	1	60	....	60	2	2	100
The Boex Holman Co., Confectionery	....	1	16	43	59	6	1	40
Winnebago Furniture Mfg. Co., Furniture	....	2	225	....	225	19	2	260
Total	57	25	1069	307	1376	50	36	2860
FORT ATKINSON, JEFFERSON CO.—								
City Brewery, Brewery	2	....	4	....	4	....	1	30
City Water & Light Co., Water, etc	....	1	4	....	4	....	2	220
Cornish, Curtis & Green Mfg. Co., Creamery Supplies	12	1	140	2	142	....	2	275
Ft. Atkinson Canning Co, Canning	5	....	40	60	100	....	2	100
Hoard's Creamery, Creamery	6	....	8	3	11	....	2	50
Hoard's Dairyman & Jeff. Co. Union, Printing	1	....	10	20	30	....	1	65
Jones Dairy Farm, Sausage	1	....	14	6	20	....	1	20
Landgraf & Wandschneider, Repairing	1	....	4	....	4	....	....	....
Merriman Bros. & Co., Repairing	1	....	6	....	6	....	....	....

ESTABLISHMENTS INSPECTED.

Location, Name, and Business.	Buildings.		Employes.				Boilers.	
	Under 3 stories.	Three or more stories.	Male.	Female.	Total.	Under 16 yrs. of age.	Number.	Total horse power.
FORT ATKINSON—Continued.								
Northwestern Mfg. Co., Wagons, etc.	23	5	225	....	225	....	2	21
Pottinger, W. A., Feed Mill	1	....	1	....	1	....	....	....
Pounder, G. H., Harrows	7	....	5	....	5	....	1	16
The Ft. Atkinson Steam Laundry, Laundry	1	....	2	3	5	....	1	14
Wilcox & Morris, Feed	....	1	5	1	6	....	1	55
Zeugner & Hoffman, Lumber, Fuel & Feed	4	2	7	....	7	....	1	45
Total	65	10	475	95	570	....	17	911
GILE, IRON CO.—								
Montreal River Lumber Co., Lumber	7	....	225	....	225	10	8	700
GILLETT, OCONTO CO.—								
Brummer, Fred, Flour Mills	2	....	6	....	6	....	1	60
Frisbie, M. F., Machinists	2	....	5	....	5	....	1	15
Gillett Times, Printing	1	....	2	1	3	....	....	....
Gillett Wooden-ware Co., Pails, etc.	5	....	25	....	25	5	1	50
Sorenson, Jacob, Bottling	1	....	3	....	3	....	....	....
Thibeaudau, Emil, Machinist	1	....	3	....	3	....	....	....
Wisconsin Butter & Cheese Co., Butter, etc.	1	....	1	....	1	....	1	12
Total	13	....	45	1	46	5	4	137
GRAFTON, OZAUKEE CO.—								
Badger Worsted Mills, Worsted	....	1	15	25	40	2	....	....
Sheboygan Knitting Mills, Knitting	1	1	3	20	23	4	....	....
Total	1	2	18	45	63	6	....	....
GRAND RAPIDS, WOOD CO.—								
Badger Box & Lumber Co., Boxes, etc.	6	....	30	....	30	5	....	....
Centralia Paper & Pulp Co., Paper & Pulp	6	....	70	5	75	3	3	375
Grand Rapids Electric & Water Co., Light, etc.	1	....	8	....	8	....	2	500
Grand Rapids Foundry Co., Machines, etc.	1	....	12	....	12	....	....	....
Grand Rapids Lumber Co., Lumber	9	....	130	....	130	2	6	330
Grand Rapids Milling Co., Flour	4	....	7	....	7	....	....	....
Grand Rapids Pulp & Paper Co., Pulp & Paper	4	....	80	5	85	2	3	375
Grand Rapids Table Co., Furniture	3	1	25	....	25	....	1	70
Grand Rapids Tribune, Printing	1	....	2	3	5	....	....	....
Krieger, Geo. F., & Co., Machinists	1	....	2	....	2	....	....	....
Mackinnon Mfg. Co., Wagon Stock, etc.	15	....	63	1	64	3	1	100
Overbeck Bros. Mfg. Co., Furniture	5	2	125	6	131	23	2	150
Pioneer Wood Pulp Co., Pulp	3	....	12	....	12	....	....	....
Riverside Steam Laundry, Laundry	1	....	3	3	6	1	1	12
Wood Co. Reporter, Printing	1	....	6	3	9	1	....	....
Totals	61	3	575	26	601	40	19	1912
GREEN BAY, BROWN CO.—								
Alort & McGuire, Pickles	1	....	6	3	9	....	1	40
Allouez Mineral Spring Co., Water	1	....	12	....	12	....	....	....
American Steam Laundry, Laundry	1	....	3	5	8	....	1	15
American Wood Working Machine Co., Mach.	8	....	50	....	50	....	1	85
Annen Candy & Biscuit Co., Candy & Biscuits	....	1	47	128	175	32	1	65
Barkhause Brick & Tile Co, Brick & Tile	6	....	25	....	25	....	1	75
Boex-Wendells Co., Candy	....	1	15	31	46	9	....	....
Brenner & Gazette Co., Candy	....	1	20	32	52	4	1	40
Britton, D. W., Cooperage Co., Barrels	2	....	84	....	84	2	2	150
Burns Boiler Co., Boilers	....	1	15	....	15	....	1	40
Columbia Bowling Alley, Bowling Alley	1	....	14	....	14	11	....	....
Diamond Match Co., Saw Mill	1	1	174	1	175	4	5	500
Dickman Mfg. Co., Mill Work	9	....	85	....	85	....	1	70
Diekmann Schober Mfg. Co., Sash, Doors, etc.	1	....	29	....	29	....	1	50
Duncan, A. M., Foundry	2	....	25	1	26	....	1	12

ESTABLISHMENTS INSPECTED.

Location, Name and Business.	Buildings.		Employes.				Boilers	
	Under 3 stories.	Three or more stories.	Male.	Female.	Total.	Under 16 yrs of age.	Number.	Total horse power.
GREEN BAY—Continued.								
Ebeling, J. H., Flour, etc.	....	1	16	....	16	....	2	160
Evans, R. O., & Co., School Supplies	....	2	43	2	45	3	1	60
Fox River Electric Ry. & Power Co., St. Ry.	7	....	42	1	43	....	4	1400
Gobry, Adam, Lumber	1	....	22	....	22	....	....	....
Green Bay Carriage Co., Carriages, etc.	1	....	12	....	12	....	....	....
Green Bay Light & Power Co., Light & Power	7	....	15	....	15	....	4	700
Green Bay Machine Co., Machinery	1	....	2	....	2	....	....	....
Green Bay Paper Fiber Co., Sulplute Pulp	3	....	103	....	103	....	6	900
Green Bay Planing Mill Co., Planing	1	1	34	....	34	....	1	125
Green Bay Pure Milk Co., Milk	2	....	5	1	6	....	1	40
Green Bay Soap Co., Soap	1	....	8	....	8	....	1	20
Green Bay Water Co., Water	5	....	6	....	6	....	5	350
Green Bay & Western Ry., Repair Shops	11	....	77	....	77	....	....	....
Hagemeister, H., Brewing Co., Brewery	5	....	74	....	74	....	2	150
Handlen, J. J., Mineral Springs, Water	7	....	12	....	12	....	....	....
Hess, G. B., Co., Flour	....	1	12	1	13	....	1	120
Hoberg, John, Co., Paper	3	....	46	8	54	2	3	380
Hochgreve Brewing Co., Brewery	8	....	13	....	13	....	2	300
Howard Foundry & Machine Co., Foundry, etc.	1	....	14	....	14	....	1	15
Hudson & Sharp, Machine Shops	1	....	9	....	9	....	1	12
Jones Bros. Spice Mills, Spices	1	1	47	7	54	....	1	75
Keeper, P. C., Jewelry	1	....	4	3	7	....	....	....
Kemnitz Furniture Co., Furniture	4	2	145	2	147	7	2	200
Larson, Wm., Canning Co., Canning	4	....	16	27	43	3	3	180
Manger, E. C., & Sons Co., Caskets	4	2	33	2	35	....	1	75
Manthey, Carl, Marble Works, Monuments	1	....	8	....	8	....	....	....
McDonald, H., Planing Mill	2	....	20	....	20	....	1	60
Milwaukee Sanding Mach. Co., Sanding Mach.	1	....	7	....	7	....	1	100
Mueller Bros. & Co., Planing Mill	1	....	24	....	24	....	1	70
Murphy Box Co., Boxes	1	....	76	....	76	17	2	200
Murphy Lumber Co., Lumber	3	....	125	....	125	....	6	360
Northern Tissue Paper Co., Tissue Paper	1	....	23	12	35	....	2	320
O'Leary Bros., Boilers	1	....	6	....	6	....	1	25
Rahr, H., Sons Co., Brewery	1	1	32	....	32	....	2	175
Rice, Geo. H., Boxes & Planing	3	....	107	....	107	12	2	200
Riemer Bros. Shoe Co., Shoes, etc.	2	....	25	15	40	1	....	....
Rothe, Jos. F., Foundry	1	....	7	....	7	....	....	....
Salvator Mineral Springs, Water	1	....	10	....	10	....	....	....
Sam Wing Laundry, Laundry	1	....	3	....	3	....	....	....
Shepek, Frank, Brooms	1	....	2	....	2	....	....	....
Straubel Machine Co., Machine Shops	1	....	8	....	8	....	....	....
The Cargile Coal Co., Wood & Coal	5	....	66	....	66	....	3	450
The Chase Mattress Co., Mattresses	1	....	5	2	7	....	....	....
Union Steam Laundry, Laundry	2	....	3	6	9	....	1	50
Van Dyke Brewing Co., Brewery	2	....	16	....	16	....	2	300
Woelz, Fred, Paper Boxes	1	....	1	7	8	....	....	....
Total	146	16	1988	297	2285	107	83	8714
HARTFORD, WASHINGTON CO.—								
Badger Steam Laundry, Laundry	1	....	1	2	3	....	1	12
Bellack, C. H. & Co., Clothing	1	....	11	24	35	2	....	....
Gilt Edge Creamery, Creamery	2	....	2	....	2	....	1	12
Hartford Machine Shops, Machine Shops	1	....	2	....	2	....	....	....
Hartford Press, Printing	1	....	2	....	2	....	....	....
Hartford Plow Works, Plows	5	....	32	1	33	....	1	80
Hartford Tannery, Tannery	2	....	3	3	6	....	1	20
Hartford Times, Printing	1	....	4	....	4	....	....	....
Hartford Roller Mills, Flour & Feed	2	....	2	....	2	....	....	....
Konrad Bros. & Werner, Malt & Grain	4	2	9	....	9	....	1	45
Laubenstein, A. G., Malt & Grain	3	....	6	....	6	....	2	100
Nehrbass Casket Co., Caskets	6	....	25	2	27	....	1	85
Place & Co., W. B., Tannery & Gloves	1	1	5	....	5	....	1	20
Portz Bros., Malt & Grain	1	2	7	....	7	....	2	110
Schwartz, Jos., Brewing Co., Brewery	1	1	7	....	7	....	1	45
Uber Bros., Tannery	2	....	10	....	10	....	1	80
Total	34	6	128	32	160	2	13	609

ESTABLISHMENTS INSPECTED.

Location, Name and Business.	Buildings.		Employes.				Boilers.	
	Under 3 stories.	Three or more stories.	Male.	Female.	Total.	Under 16 yrs. of age.	Number.	Total horse power.
HAYWARD, SAWYER CO.—								
City Water Plant, Water	1	....	4	....	4	....	2	150
Hayward Enterprise, Printing	1	....	3	....	3	....	....	....
Hayward Republican, Printing	1	....	2	2	4	....	....	....
Hines Lumber Co., Lumber	2	....	250	....	250	....	10	950
New Richmond Roller Mills, Flour	2	....	4	....	4	....	1	40
Total	7	....	263	2	265	....	13	1140
HAZEL GREEN, GRANT CO.—								
Hazel Green Mining Co., Mining	4	2	40	....	40	....	....	....
Jefferson Mining Co., Mining	1	1	18	....	18	....	....	....
Mermaid Mining Co., Mining	1	....	10	....	10	....	1	20
Scrabble Creek Mining Co., Mining	1	....	12	....	12	....	2	80
Total	7	3	80	....	80	....	3	100
HAZELHURST, ONEIDA CO.—								
Yakey Lumber Co., Lumber	9	....	190	....	190	6	5	700
HOUGHTON, BAYFIELD CO.—								
Prentice-Brown Stone Co., Quarries	4	....	40	....	40	....	2	120
Smith, W. H., Quarries	2	....	25	....	25	....	1	20
Total	6	....	65	....	65	....	3	140
HUDSON, ST. CROIX CO.—								
Artesan Brewery, Brewery	1	1	4	....	4	....	1	40
Burkhardt, C., Electric Plant	1	....	1	....	1	....	....	....
Cassanova Brewing Co., Brewery	1	1	4	....	4	....	1	35
Central Lumber Co., Lumber	4	....	200	....	200	....	5	300
C., St. P., M. & O. Ry., Shops	11	....	300	....	300	....	4	600
City Carriage & Wagon Shops, Carriages, etc	1	....	5	....	5	....	....	....
City Water Works, Water	1	....	2	....	2	....	2	100
Enterprise Steam Laundry, Laundry	1	....	2	2	4	....	1	15
Fullerton, E. M., Shops	1	....	2	....	2	....	....	....
Hosford, Geo. K., Elevator	2	....	2	....	2	....	....	....
Hudson Bottling Works, Bottling	1	....	1	1	2	....	....	....
Hudson Produce Co., Sorting	4	....	8	12	20	....	....	....
Hudson Star Times, Printing	1	....	3	1	4	....	....	....
Interstate Box Mfg. Co., Boxes	1	2	30	10	40	....	1	20
New Richmond Roller Mills, Flour	....	1	3	....	3	1	....	....
St. Croix Observer, Printing	1	....	2	1	3	....	....	....
Thorson, C. S., Wagons	2	....	3	....	3	....	....	....
True Republican, Printing	1	....	1	1	2	....	....	....
Total	35	5	573	28	601	1	15	1110
HURLEY, IRON CO.—								
Harmony Mining, Mine	4	....	50	....	50	....	3	300
Hurley Boiler Works, Boilers	1	....	5	....	5	....	....	....
Hurley Bottling Works, Bottling	1	....	2	....	2	....	....	....
Odanah Iron Co., Mine	4	....	140	....	140	1	2	250
Twin City Iron Works, Iron	2	....	12	....	12	....	....	....
Total	12	....	209	....	209	1	5	550
IRON RIVER, BAYFIELD CO.—								
Alexander, Edgar, Lumber Co., Lumber	2	1	200	....	200	....	6	700
Iron River Pioneer, Printing	1	....	3	....	3	....	....	....
Iron River, Water, Light & Power Co., Water	1	....	3	....	3	....	2	100
McIntosh Lumber Co., Lumber	5	....	25	....	25	....	1	40
Total	9	1	231	....	231	....	9	840
IRVINGTON, DUNN CO.—								
Box Factory, Boxes	5	....	75	....	75	16	3	140

ESTABLISHMENTS INSPECTED.

Location, Name and Business.	Buildings.		Employes.				Boilers.	
	Under 3 stories.	Three or more stories.	Male.	Female.	Total.	Under 16 yrs. of age.	Number.	Total horse power.
JANESVILLE, ROCK CO.—								
Badger State Machine Co., Machines	1	....	8	....	8	....	....	....
Baines, F. S., Tobacco Warehouse	1	....	25	40	65	3	....	....
Bicknell Hardware Co., Machines	1	....	4	....	4	....	....	....
Blodgett Milling Co., Flour	3	1	21	1	22	....	2	160
Burns, T. P. & Son, Cotton	3	1	4	3	7	....	1	34
Carle, L. B., & Son, Tobacco Warehouse	1	....	24	56	80	1	....	....
C., M. & St. P. Ry., Shops	1	....	15	....	15	....	1	30
C. & N. W. Ry., Shops	2	....	60	....	60	....	1	125
Choate-Hollister Furniture Co., Furniture	2	....	109	....	109	2	2	80
Clinton, W. E., & Co., Bindery	....	1	3	6	9	....	....	....
Concentrated Flaked Potato Co., Flaked Potatoes	....	1	15	....	15	....	1	30
Croak Brewing Co., Brewery	6	....	5	1	6	....	2	90
Decker, Geo. M., Tobacco Warehouse	1	....	8	22	30	....	....	....
Doty, E. P., Feed	....	1	4	....	4	....	....	....
Fifield Bros., Lumber Co.	1	....	5	....	5	....	....	....
Globe Windmill Co., Windmills	1	....	6	....	6	....	....	....
Green, J. L. & M. F., Tobacco Warehouse	....	1	30	80	110	9	....	....
Hanson Furniture Co., Furniture	....	1	35	....	35	....	1	80
Heddles, S. B., Tobacco Warehouse	1	....	22	38	60	....	....	....
Hemming, Wm., Sons, Ale Brewing	2	....	4	....	4	....	1	10
Hohenadel, P., Jr., Co., Canning	3	1	250	....	250	....	3	240
Hough Shade Co-operative Co., Shades	3	....	15	45	60	4	1	80
Isabel Mfg. Co., Skirts	1	....	5	40	45	....	....	....
Janesville Barb Wire Co., Wire	2	....	120	....	120	....	1	200
Janesville Batten Co., Batting	2	....	16	4	20	....	1	50
Janesville Carriage Co., Carriages, etc.	2	1	25	....	25	....	....	....
Janesville Cement Post Co., Cement Posts	2	....	75	....	75	....	1	150
Janesville Clothing Co., Clothing	....	1	10	35	45	....	....	....
Janesville Daily Recorder, Printing	....	1	9	1	10	....	....	....
Janesville Electric Co., Plant	1	....	15	....	15	....	2	160
Janesville Daily Gazette, Printing	....	1	33	3	36	....	....	....
Janesville Journal, Printing	....	1	1	1	2	....	....	....
Janesville Machine Co., Machines, etc.	16	3	247	3	250	....	3	420
Janesville Pearl Button Co., Buttons	1	....	13	15	28	4	....	....
Janesville Plating Co., Novelties	1	....	6	....	6	....	....	....
Janesville Steam Laundry, Laundry	....	1	3	12	15	....	1	60
Janesville St. Ry Co., Power Station	1	....	15	....	15	....	2	180
Jeffries Co., Sash & Doors	3	1	65	....	65	....	2	200
Jones, A. W., Tobacco Warehouse	1	....	10	40	50	1	....	....
Kent Corn Planter Co., Corn Planters	1	....	12	1	13	1	1	50
Knipp, F., Brewery	....	1	8	....	8	....	2	50
Kruger, A. C., Shop	1	....	10	....	10	....	....	....
Lewis Knitting Co., Knitting	1	....	5	75	80	....	1	25
Marquesee, J., & Co., Tobacco Warehouse	1	....	17	24	41	2	....	....
Marzluff, F. M., & Co., Shoes	1	1	85	50	135	12	....	....
Milwaukee Elevator Co., Elevator	1	....	2	....	2	....	....	....
New Doty Mfg. Co., Machinery	10	....	43	1	44	....	....	....
New Gas Light Co., Gas	1	....	7	....	7	....	2	300
Parker Penn Co., Pens	....	1	61	9	70	....	....	....
Randall & Athon, Machine Shop	1	....	5	....	5	....	....	....
Riverside Steam Laundry, Laundry	1	....	4	14	18	....	....	....
Robinsons Brewing Co., Brewery	6	....	1	....	1	....	1	150
Rock River Cotton Co., Cotton Goods	....	3	45	30	75	....	1	150
Rock River Hay Tool Co., Hay Tools	1	....	5	1	6	....	....	....
Rock River Machine Co., Machinery	1	1	25	....	25	....	1	25
Rock River Woolen Mills, Woolen Goods	9	....	40	40	80	4	2	260
Rumrill, G. H., Tobacco Warehouse	1	....	12	25	37	4	....	....
Sanford & Soverhill, Tobacco Warehouse	1	....	16	39	55	4	....	....
Shurtleff & Co., Ice Cream	1	....	6	2	8	....	1	15
Soulman, John, & Co., Tobacco Warehouse	1	....	7	23	30	3	....	....
South Side Brewing Co., Brewery	2	....	6	....	6	....	2	85
Sylvester & Sons, Tobacco Warehouse	1	....	15	50	65	....	....	....
Taylor, Lowell Mfg. Co., Wire Fence	1	....	10	....	10	....	....	....
Thoroughgood & Co., Boxes	2	1	25	20	45	2	1	125

ESTABLISHMENTS INSPECTED.

Location, Name and Business.	Buildings.		Employes.				Boilers.	
	Under 3 stories.	Three or more stories.	Male.	Female.	Total.	Under 16 yrs. of age.	Number.	Total horse power.
JANESVILLE—Continued.								
Troy Steam Laundry, Laundry	1	....	3	4	7	....	1	20
Tuckwood Co., Windmills	1	....	7	....	7	....	....	....
Walsh, T. E., Tobacco Warehouse	1	....	10	25	35	....	....	....
Wisconsin Carriage Co., Carriages	....	1	55	....	55	....	1	60
Total	115	27	1878	879	2757	56	46	3604
JEFFERSON, JEFFERSON CO.—								
Ambrose, F. O., Machinery	2	....	5	....	5	....	....	....
Banner Printing Co., Printing	1	....	4	1	5	1	....	....
City Brewery, Brewery	5	3	20	....	20	....	2	160
Fernholz Lumber Co., Sash & Doors	3	....	20	....	20	....	1	50
Haubenschild, A., Wagons	1	....	2	....	2	....	1	6
Heimer Hide & Leather Co., Tannery	3	1	10	....	10	....	1	80
Jefferson Brewing & Malting Co., Brewery	2	....	4	....	4	....	1	8
Jefferson Brick & Tile Co., Brick & Tile	5	....	45	....	45	....	1	100
Jefferson City Electric Light & Water Co., Light and Water	2	....	3	....	3	....	2	200
Jefferson Flouring Mill, Flour	1	1	4	....	4	....	....	....
Jefferson Printing Co., Printing	1	....	5	....	5	....	....	....
Jefferson Steam Laundry, Laundry	1	....	1	2	3	....	1	15
Jefferson Woolen Mfg. Co., Woolens	4	1	16	4	20	....	....	....
John & Beck Shoe Co., Shoes	1	....	13	3	16	....	....	....
Kemmeter Bros., Brick	3	....	22	....	22	....	1	40
Lytle & Stoppenbach, Elevators	2	1	2	....	2	....	1	65
Lytle & Stoppenbach, Malt	4	2	6	....	6	....	2	110
Neis, Leonard, Monuments	1	....	2	....	2	....	....	....
Rock Valley Creamery, Creamery	1	....	2	....	2	....	1	15
Shumacher & Sons, Creamery	1	....	2	....	2	....	1	30
Stoppenbach's Sons, C., Packing House	8	1	20	....	20	....	1	80
The Copeland-Ryder Co., Shoes	5	1	87	23	110	2	2	100
Troeger, Geo., Tannery	3	....	3	....	3	....	1	40
Union Upholstering Co., Couches	1	....	4	....	4	....	1	65
Vaughn, O. C., Wagons & Harrows	6	....	20	....	20	....	1	65
Wisconsin Mfg. Co., Chairs	4	1	46	4	50	....	1	100
Total	71	12	368	37	405	3	23	1329
JEFFRIES, ONEIDA CO.—								
Worden Lumber Co., Lumber	5	....	50	....	50	2	2	250
JOHNSON'S CREEK, JEFFERSON CO.—								
Grell Butter & Egg Co., Creamery	2	....	4	....	4	....	1	20
Kottke & Warne Co., Carriages	2	....	10	....	10	....	....	....
Mansfield, G. C. Co., Creamery	2	1	6	....	6	....	2	40
Pitzne & Huebner, Feed	2	....	3	....	3	....	1	40
Total	8	1	23	....	23	....	4	100
KAUKAUNA, OUTAGAMIE CO.—								
Hoehn Machine Co., Machinery	3	....	4	....	4	....	....	....
Kaukauna Fiber Co., Pulp	10	....	60	....	60	....	3	450
Kaukauna Lumber Co., Lumber	9	....	7	....	7	....	....	....
Kaukauna Machine Works, Machinery	6	....	14	1	15	....	....	....
Kaukaunna Sun, Printing	1	....	3	2	5	....	....	....
Kaukauna Steam Laundry, Laundry	3	....	2	4	6	....	1	16
Kaukauna Times, Printing	1	....	3	2	5	....	1	7
Kaukaunna Water Power Co., Water	1	....	1	....	1	....	2	160
Lindaur Pulp Co., Pulp	5	....	28	....	28	....	1	12
Outagamie Paper Co., Paper	5	4	77	33	110	6	2	160
Thilimay Pulp Co., Pulp	3	....	18	....	18	1	1	75
Thilimay Pulp & Paper Co., Pulp & Paper	8	....	126	24	150	....	3	600
Union Bag & Paper Co., Paper Bags	5	2	95	75	170	5	3	450
Total	60	6	438	141	579	12	17	1930

ESTABLISHMENTS INSPECTED.

Location, Name and Business.	Buildings.		Employes.				Boilers.	
	Under 3 stories.	Three or more stories.	Male.	Female.	Total.	Under 16 yrs. of age.	Number.	Total horse power.
KENOSHA, KENOSHA CO.—								
Allen, N. R., Sons, Tannery	12	4	725	2	727	....	12	1400
American Steam Laundry, Laundry	4	....	6	8	14	....	1	20
Arnold, W. G., Gasoline Engines	1	....	2	....	2	....	....	....
Badger Brass Mfg. Co., Brass	2	....	64	7	71	1	....	....
Boosted, Emil, Repairs	2	....	4	....	4	....	....	....
Chicago Brass Co., Brass Works	21	....	275	....	275	3	8	800
Chicago-Rockford Hosiery Co., Hosiery	11	....	500	700	1200	300	6	900
Christian, W. E., & Co., Machinery	1	....	4	....	4	....	....	....
Cooper Underwear Co., Underwear	3	....	38	57	95	4	....	....
Davy Burnt Clay Ballast Co., Ballast	6	....	5	....	5	....	1	60
Eagle Steam Laundry, Laundry	2	....	2	6	8	....	1	20
Frost Mfg. Co., Brass goods	7	....	65	5	70	....	1	80
Grant Planing Co., Sash, Doors, etc.	6	....	14	....	14	....	1	75
Jeffery Bros., B., & Co., Automobiles	17	....	500	....	500	9	4	300
Kenosha Brass & Iron Works, Foundry	8	....	15	....	15	....	1	75
Kenosha Crib Co., Cribs	5	....	100	1	101	5	2	160
Kenosha Evening News, Printing	1	....	11	3	14	....	....	....
Kenosha Gas & Electric Co., Light	8	....	9	....	9	....	9	690
Kenosha Sash, Door & Blind Co., Sash, etc.	5	....	15	....	15	....	1	40
Kenosha Steam Laundry, Laundry	1	....	4	6	10	....	1	15
Krebs, Charles, Repairs	1	....	1	....	1	....	....	....
Modern Mfg. Co., Gloves & Mittens	1	....	2	6	8	....	....	....
Muselback, A. D., Typewriter Co., Typewriters	6	....	150	3	153	....	4	480
Pettit, M. H., Malting Co., Malt	3	3	17	....	17	....	2	180
Pirsch, Nicholas, Wagons	1	....	11	....	11	....	....	....
Pirsch, Peter & Co., Wagons	2	....	6	....	6	....	....	....
Remers Laundry, Laundry	1	....	4	4	8	....	1	14
The Bain Wagon Co., Wagons	35	6	265	....	265	....	2	270
The Kenosha Daily Gazette, Printing	....	1	6	1	7	....	....	....
The Kenosha Union, Printing	1	....	2	1	3	....	....	....
The Simmons Mfg. Co., Bed Springs, etc.	10	3	850	100	950	....	9	900
Wells, Frank, Machinery Co., Machinery	2	....	30	....	30	....	....	....
Windsor Spring Co., Machinery	4	....	56	4	60	....	1	100
Total	190	17	3758	914	4672	322	68	6579
KEWASKUM, WASHINGTON CO.—								
Backhaus & Stark, Mill	1	....	3	....	3	....	....	....
Grill, H. J., Butter & Egg Co., Creamery	1	....	2	....	2	....	1	10
Remmell, Matt, Lumber	1	....	8	....	8	....	1	50
Remmell, Nicholas, Machine Shop	1	....	3	....	3	....	....	....
Rosenheimer, L., Malt & Grain, Malthouse	2	2	18	....	18	....	2	300
Total	6	2	34	....	34	....	4	360
KEWAUNEE, KEWAUNEE CO.—								
Altar Factory, Church Altars	1	....	2	....	2	....	....	....
Borgman, J. M., Sash, Doors & Blinds	6	....	10	....	10	....	1	60
Devall, Joe. & Co., Elevator	1	....	4	....	4	....	....	....
Hornmecheet & Son, Farm Machinery	2	....	4	....	4	....	1	60
Kewaunee Iron Works, Iron	1	....	6	....	6	....	1	40
Mach, Anton, Brewery	5	....	5	....	5	....	1	35
Seyk, W. Co., Canning	3	1	35	30	65	30	2	200
Seyk, W., Co., Elevator	2	....	4	....	4	....	....	....
Svoboda, Jos., Church Furniture	3	....	8	....	8	....	1	20
Syks, Lumber	1	....	6	....	6	....	....	....
Waninger, W. F., Canning	6	1	84	36	120	20	1	125
Ziemer, Aug., Foundry	1	....	3	....	3	....	1	10
Total	32	2	171	66	237	50	9	550
KILBOURN CITY, PORTAGE CO.—								
Dells Reporter, Printing	1	....	1	1	2	....	....	....
Enterprise Steam Laundry, Laundry	1	....	2	3	5	1	....	....
Kilbourn City Water Works, Water	1	....	1	....	1	....	1	60

ESTABLISHMENTS INSPECTED.

Location, Name and Business.	Buildings.		Employes.				Boilers.	
	Under 3 stories.	Three or more stories.	Male.	Female.	Total.	Under 16 yrs. of age.	Number.	Total horse power.
KILBOURN CITY—Continued.								
Kilbourn Machine Co., Windmills, etc.	1	....	7	....	7	....	1	60
Marshall, G. M., Repair Shops	1	....	1	....	1	....	....	....
Mirror Gazette, Printing	1	....	1	2	3	....	....	....
Total	6	....	13	6	19	1	2	120
LAC DU FLAMBEAU, VILAS CO.—								
Lac du Flambeau Lumber Co., Lumber	8	....	240	....	240	....	7	700
LA CROSSE, LA CROSSE CO.—								
Ammundson & Schulz, Screens, etc.	2	....	6	....	6	....	....	....
Badger Steel Roofing & Corrugating Co., Roofing, etc.	1	....	12	....	12	1	....	....
Bell Machine Co., Machine Shops	1	....	4	....	4	....	....	....
Benton, T. P., & Son, Electrical Machinery	1	....	20	....	20	....	....	....
Cargill, W. W., Elevator	1	1	6	....	6	....	1	80
Central Electric Co , Light & Power	1	1	11	1	12	....	3	450
Central Newspaper Union, Printing	....	1	5	....	5	....	....	....
Chicago, Burlington & Quincy Ry., Shops	8	....	205	....	205	....	2	160
Chicago, Milwaukee & St. P. Ry., Shops	5	....	45	....	45	....	2	230
City Water Works, Water	1	....	7	....	7	....	4	440
Close, C. T., Gasoline Engines	2	....	2	....	2	....	....	....
Coleman, C. L., Lumber Co., Lumber	12	1	230	20	250	....	6	620
Dagendesh, Geo., Building Stone	2	....	4	....	4	....	1	40
Davis, Medary & Platz, Tannery	5	1	90	....	90	1	5	275
Doud & Son, Flour Barrels	2	....	12	....	12	....	1	60
Fountain City Drill Co., Drills	11	....	96	2	98	....	1	100
Franklin Iron Works, Foundry & Repairs	3	....	3	....	3	....	....	....
Franz-Bartl, Brewery	1	1	8	....	8	....	1	50
Funke, Jos. B., & Co., Candy	....	1	40	120	160	16	1	75
Funk, M., Boiler Works, Boilers	5	....	15	....	15	....	....	....
Gardner Printing Co., Printing	1	....	8	4	12	2	....	....
Gateway Pearl Button Co., Buttons	....	1	29	....	29	1	....	....
Graus, A., & Son, Feed	....	1	6	....	6	....	....	....
Gund, John, Brewing Co , Brewery	14	5	159	30	189	10	4	600
Hackner, E., Church Furniture	3	....	48	....	48	4	....	....
Haerter, Nic., Bindery	1	....	4	1	5	1	....	....
Hellemnan, G., Brewing Co., Brewery	9	4	75	8	83	1	3	270
Herkin, Geo., Trunks	1	....	4	....	4	....	....	....
Holway, N. B. (Estate), Lumber & Planing	10	....	185	....	185	3	7	400
Hyde, S. Y., Grain Elevator	1	1	6	....	6	....	1	80
James John, Foundry & Machines	5	....	37	1	38	....	1	30
Kellar, G. A., Printing	1	....	4	....	4	1	....	....
Kratchwill, M., Candy	....	1	19	20	39	10	....	....
Kuhn, R. C., Sash & Door Co., Sash & Doors	3	2	75	....	75	4	2	160
La Crosse Art Glass Co., Mirrors & Lettered Glass	1	....	3	....	3	....	....	....
La Crosse Boot & Shoe Co , Shoes	....	1	23	9	32	1	....	....
La Crosse Box Co., Boxes	3	....	20	....	20	....	....	....
La Crosse Bridge & Steel Co., Bridge Building	1	....	13	....	13	....	....	....
La Crosse Carriage Co , Carriages	....	2	60	....	60	1	....	....
La Crosse Cheese & Butter Co., Butter, etc.	1	....	9	5	14	....	1	10
La Crosse City Ry. Co., St. Car Line	2	....	60	....	60	....	3	375
La Crosse Clothing Co., Shirts & Overalls	1	....	7	55	62	2	....	....
La Crosse Cooperage Co., Barrels, etc.	1	....	15	....	15	....	....	....
La Crosse Cracker & Candy Co., Crackers, etc.	1	....	44	38	82	17	1	25
La Crosse Engraving Co., Engraving	....	1	10	....	10	....	....	....
La Crosse Gas & Electric Co , Gas	4	....	7	....	7	....	1	50
La Crosse Gas & Electric Co., Light, etc.	1	....	15	....	15	....	5	1000
La Crosse Knitting Co., Knitting	1	1	15	68	83	10	1	75
La Crosse Paper Box Co., Paper Boxes	1	....	4	10	14	....	....	....
La Crosse Plow Co., Farm Machinery	12	5	223	2	225	1	2	350
La Crosse Press Co., Printing	1	....	22	1	23	1	....	....
La Crosse Rubber Mills Co., Mackintosh Coats	7	....	50	155	205	....	2	180
La Crosse Soap Co., Soap	....	1	3	....	3	....	1	25

ESTABLISHMENTS INSPECTED.

Location, Name and Business.	Buildings.		Employes.				Boilers.	
	Under 3 stories.	Three or more stories.	Male.	Female.	Total.	Under 16 yrs. of age.	Number.	Total horse power.
LA CROSSE—Continued.								
La Crosse Steam Laundry, Laundry	2	1	12	45	57	....	1	40
La Crosse Steel Roofing & Corrugating Co., Roofing, etc.	3	....	45	1	46	....	....	....
La Crosse Threshing Mach. Mfg. Co., Th. Ma.	3	....	27	....	27	....	1	60
La Crosse Volksfreund, Printing	1	....	5	....	5	....	....	....
La Crosse Wagon Stock Co., Wagon Stock	2	....	11	....	11	....	1	40
La Crosse Well Drill Works, Drills & Forging	1	....	5	....	5	....	1	12
Langdon & Boyd, Packing house	3	....	25	5	30	....	2	120
Larson & Bros. Co., Boxes & Crates	1	....	10	....	10	....	1	13
Listman Mill Co., Flour	2	2	67	6	73	....	4	400
Martin Bros. Co., Overalls, Jackets, etc.	....	1	3	47	50	1	....	....
Medary, J. S., Co., Harness & Saddles	2	1	36	4	40	....	....	....
Michel, C. & J., Brewing Co., Brewery	13	4	61	4	65	1	3	300
Miller, Aug., Brooms	1	....	14	....	14	....	....	....
Modern Steam Laundry, Laundry	1	1	4	18	22	....	1	20
Monitor Brewing Co., Brewery	2	....	4	....	4	....	1	40
Moore's, C. N., Laundry, Laundry	1	....	1	4	5	....	....	....
Northern Wisconsin Leaf Tobacco Co., Tobacco Warehouse	....	1	8	42	50	6	....	....
North Side Bottling Works, Soda Water	1	....	10	1	11	....	1	15
Ott, B., & Sons, Bark Mills & Repairing	1	....	11	....	11	....	....	....
Reimers, D., Packing House	3	....	10	....	10	....	....	....
Reliance Steam Boiler Works, Boilers	2	....	15	1	16	....	....	....
Reliable Steam Laundry, Laundry	1	....	8	35	43	....	1	40
Salzer, John A., Seed Co., Seeds	4	1	78	33	111	5	....	....
Segelke & Kohlhaus Mfg. Co., Sash, etc.	3	3	128	2	130	3	4	200
Seidenzol, Theo., Tool	1	....	1	....	1	....	....	....
Shorna, Chas., Furrier	1	....	1	3	4	....	....	....
Smith Mfg. Co., Wagons	7	....	50	....	50	1	2	120
Sorensen, O. J., Store & Bar Fixtures	2	....	30	1	31	....	1	70
Spicer & Buschman, Printing	1	....	10	....	10	....	....	....
Stamping & Tool Co., Tools	....	1	11	3	14	....	....	....
Starch Bros., Creamery	1	....	13	....	13	1	....	....
Star Knitting Co., Knitting	....	1	2	22	24	....	....	....
The Morning Chronicle, Printing	1	....	14	1	15	....	....	....
The Northern Association, Printing	1	....	7	2	9	1	....	....
The Shertz–Wiltz Co., Printing	....	1	14	2	16	1	....	....
Tisch Bros. Co., Cigar Boxes	1	....	13	4	17	2	....	....
Tomasak & Nekola, Plows and Repairing	2	....	2	....	2	....	1	20
Torrance, J. & Son, Foundry	4	....	19	....	19	1	....	....
Trow, A. S. & Co., Lumber, Planing, etc.	6	....	85	....	85	....	5	235
Valstenec, Printing	1	....	4	1	5	1	....	....
Voight (Estate) & H. Ritter, Carriages and Repairing	1	1	20	....	20	....	1	25
Vought–Berger Co., The, Telephones, etc.	3	....	71	6	77	....	1	35
Waringer–Houthmaker, Soda Water	1	....	7	....	7	....	1	10
Weekly Argus, Printing	1	....	2	....	2	....	....	....
West'n Banana Crate Mfg. Co., Banana Crates	1	....	10	2	12	....	....	....
Wisconsin Pearl Button Co., Buttons	1	....	100	116	216	....	1	100
Yeo & Clark (city mills), Flour	1	1	5	....	5	....	1	60
Total	242	53	3172	961	4133	112	99	8175
LAKE GENEVA, WALWORTH CO.—								
Equitable Electric Light Co., Light	4	....	6	....	6	....	2	160
Lake Geneva Creamery, Creamery	1	....	9	....	9	....	1	15
Lake Geneva Water & Light Co., Water, etc.	4	....	2	....	2	....	2	200
Steam Laundry, Laundry	1	....	2	3	5	....	1	20
The Herold, Printing	1	....	3	....	3	....	....	....
The News, Printing	1	....	4	1	5	....	....	....
Total	12	....	26	4	30	....	6	395
LAKE NEBAGAMON, DOUGLAS CO.—								
Nebagamon Lumber Co., Lumber	8	....	306	....	306	4	5	400

ESTABLISHMENTS INSPECTED.

Location, Name and Business.	Buildings		Employes.				Boilers.	
	Under 3 stories.	Three or more stories.	Male	Female.	Total.	Under 16 yrs of age.	Number.	Total horse power.
LANCASTER, GRANT CO.—								
Brooker Bros., Planing Mill	3	....	2	....	2	....	....	....
Grebe & Karper, Flour, etc.	1	1	3	....	3	....	1	80
Lancaster Bridge Works, Bridges	1	....	7	....	7	....	....	....
Lancaster Elec. Light Co., Light	4	....	3	....	3	....	2	200
Schuster Bros., Feed	1	....	3	....	3	....	....	....
Total	10	1	18	....	18	....	3	280
LAONA, FOREST CO.—								
Connor Lumber & Land Co., Lumber	8	....	400	....	400	11	5	650
LENA, OCONTO CO.—								
Bassett, J. M., Elevator	....	1	5	....	5	....	....	....
Grunwaldt, O. W., Lumber, Sash & Doors	3	....	10	....	10	....	1	80
Metzen, N. C., Roller Mill	1	1	5	....	5	....	1	100
Niquell, Ed., Creamery	1	....	2	....	2	....	1	15
Total	5	2	22	....	22	....	3	195
LENOX, FOREST CO.—								
Wolfgram, Ed., Lumber	1	....	10	....	10	....	1	50
MADISON, DANE CO.—								
Alford Bros, Laundry	1	....	8	30	38	....	2	120
American Cigar Co., Tobacco Warehouse	1	....	50	220	270	18	....	....
America Publishing Co., Printing	....	1	4	2	6	....	....	....
Badger State Shoe Co., Shoes	2	....	57	30	87	9	1	40
Barnard & Wilder, Tobacco Warehouse	1	....	18	20	38	....	....	....
Breckheimer Brewing Co., Brewery	8	....	8	....	8	....	1	30
Cantwell, M. J. Printing Co., Printing	1	....	28	4	32	2	....	....
C., M. & St. P. Ry. Shops, Shops	10	....	30	....	30	....	2	105
C. & N. W. Ry. Shops, Shops	5	....	17	....	17	....	1	60
Cohn, A & Co., Tobacco Warehouse	....	1	22	56	78	2	....	....
Curtis Collar & Pad Co., Collars & Pads	2	....	6	8	14	....	1	25
Democrat Printing Co., Printing	1	....	67	24	91	....	....	....
Fauerbach Brewing Co., Brewery	8	2	15	2	17	....	2	100
F. F. F. Steam Laundry, Laundry	....	1	5	15	20	....	1	35
Findorf, J. H., Sash, Doors & Planing	3	1	50	....	50	....	1	20
Frederickson Mfg. Co., Sash & Doors	9	....	40	....	40	....	....	....
Fuller & Johnson Mfg. Co., Agr. Mach	23	1	325	....	325	6	3	400
Garlius & Spooner, Gasoline Engines	1	....	3	....	3	1	....	....
Gisholt Machine Co, Tools & Machinery	10	....	247	3	250	2	2	300
Grimm's Book Bindery, Bindery	1	....	8	6	14	1	....	....
Hausmann Brewing Co., Brewery	8	2	25	....	25	....	2	205
Johnson, Adolph, Sash & Doors	2	....	10	....	10	....	....	....
King & Walker, Foundry & Machinery	9	....	40	....	40	....	1	30
Kupfer, Theo., Foundry	1	....	5	....	5	....	....	....
Madison Candy Co., Confectionery	1	....	17	20	37	8	....	....
Madison City Waterworks, Water	1	....	5	....	5	....	2	300
Madison Gas & Electric Co., Gas, etc	9	....	80	....	80	....	5	1025
Madison Knitting Co., Knitting	1	....	2	10	12	....	1	25
Madison Muslin Underwear Co., Underwear	1	....	3	32	35	....	....	....
Madison Saddlery Co., Harness	....	1	21	1	22	....	....	....
Madison Steam Laundry, Laundry	1	....	3	5	8	....	1	12
Madisonian, Printing	1	....	4	....	4	....	....	....
Mason & Kipp Mfg. Co., Oil Pumps	3	....	16	1	17	....	1	30
Mayer, Walter, Printing	1	....	2	....	2	....	....	....
Northern Electric Mfg. Co., Dynamos	2	....	237	44	281	1	3	600
Payton-Martin, Foundry	1	....	31	....	31	....	....	....
Rosenmayer, J. J. & Co., Pickles	1	....	3	....	3	....	....	....
Sayle Building & Mfg. Co, Sash & Doors	2	....	25	....	25	....	1	12
Silbernagel, J. J., Sash & Doors	5	....	10	....	10	....	1	35
Standard Telephone Co., Telephone	1	....	27	3	30	1	....	....

ESTABLISHMENTS INSPECTED.

Location, Name and Business.	Buildings.		Employes.				Boilers.	
	Under 3 stories.	Three or more stories.	Male.	Female.	Total.	Under 16 yrs. of age.	Number.	Total horse-power.
MADISON—Continued.								
State Journal Printing Co., Printing	2	1	52	8	60	5	1	30
Strehlow, H., Dyeing	1	....	4	2	6	....	1	5
Sutter Bros., Tobacco Warehouse	....	1	8	44	52	3	....	....
Taylor & Gleason, Printing	....	1	6	....	6	....	....	....
Teckmeyer Candy Co, Candy	1	....	14	22	36	4	....	....
Tracy-Gibbs & Co., Printing	1	1	13	2	15	2	1	20
Wisconsin Botschafter, Printing	1	....	4	....	4	....	....	....
Wisconsin Staatz Zeitung, Printing	1	....	3	....	3	1	....	....
Wisconsin Wagon Co., Wagons	1	1	5	....	5	....	....	....
Total	146	15	1683	614	2297	66	38	3564
MANITOWOC, MANITOWOC CO.—								
Aluminum Foundry Co., Aluminum Goods	1	....	2	....	2	....	....	....
American School Furn. Co., School Furniture	7	1	217	1	218	14	3	300
Brachman, Wl. J, Contractor	1	....	5	....	5	....	1	5
Bradl, Ignatz, Wagons	1	....	3	....	3	....	....	....
Brandt Printing & Bindery Co., Ptg., etc	1	....	7	2	9	....	....	....
Burger, H. B., Boats	1	....	8	....	8	....	....	....
Cartwright-Mattson Co., Gloves	1	....	40	90	130	....	....	....
Dobberts, Chas. & Sons, Tannery	2	....	5	....	5	....	1	35
Drost, H. Son, Paper Boxes	3	....	6	8	14	....	1	25
Electric Light Co., Light	1	....	4	....	4	....	4	320
Enterprise Boiler Works, Boilers	1	....	6	....	6	....	....	....
Goodrich Transportation Co., Repair Shop	14	....	100	....	100	....	2	160
Hall Bros., Bale Ties	1	....	3	....	3	....	....	....
Hanson Wagon Works, Wagons	1	....	12	....	12	....	1	12
Kunz-Blesser Co., Brewery	5	1	15	....	15	....	1	100
Madson, M. G., Seed Co., Seeds	....	2	5	50	55	....	....	....
Manitowoc Aluminum Novelty Co, Novelties	5	....	78	31	109	22	2	125
Manitowoc Bldg. Sup. Co., Doors, Sash, etc	6	....	27	....	27	....	1	90
Manitowoc Dry Docks Co., Dry Dock	8	....	250	....	250	....	2	160
Manitowoc Gas Light Co., Gas	2	....	4	....	4	....	1	25
Manitowoc Glue Co., Glue	4	....	30	....	30	1	2	160
Manitowoc Machine Co., Engines	3	....	4	....	4	....	1	15
Manitowoc Mattress Co., Mattresses	....	1	8	3	11	1	....	....
Manitowoc Pea Canning Co., Canning	6	1	45	30	75	....	2	140
Manitowoc Post, Printing	1	....	3	1	4	....	....	....
Manitowoc Seed Co., Seeds	....	1	4	30	34	....	....	....
Manitowoc Steam Boiler Works, Boilers	3	....	44	1	45	....	2	200
Manitowoc Water Works, Water	1	....	4	....	4	....	2	150
Merchants & M'f'r's Ptg. Co., Printing	1	....	6	4	10	2	....	....
Northern Grain Co, Elevators	5	6	32	....	32	....	5	575
Oriental Mills, Flour	2	1	7	....	7	....	....	....
Richard Iron Works, Engines	5	....	50	....	50	....	1	50
Richter, A. M. & Sons, Vinegar & Mustard	4	1	6	1	7	....	1	75
Reiss, C., Coal Co., Coal	11	....	90	....	90	....	5	475
Schmoor Bros., Paper Boxes, etc	3	....	5	11	16	2	1	40
Schoch, Christ. Lbr. Co., Sash & Doors	4	....	28	....	28	....	1	40
Schreihart Brewing Co., Brewery	3	1	14	....	14	....	1	150
Smalley Mfg. Co., Agricultural Imp	9	....	67	2	69	1	1	100
Snow Flake Laundry, Laundry	2	....	3	6	9	....	1	25
Stolz Mfg. Co., Ornaments	1	....	3	50	53	4	....	....
The Albert Landreth Canning Co., Canning	4	1	80	80	160	3	3	325
The Citizens' Publishing Co, Printing	1	....	6	2	8	....	....	....
The Palace Steam Laundry, Laundry	1	....	2	6	8	....	1	10
The Pilot Publishing Co., Printing	1	....	6	4	10	....	....	....
The Wm. Rahr Sons Co., Brewing & Malt Food	9	6	95	5	100	2	6	600
Willoth, J., & Sons, Tools	2	....	3	....	3	....	1	25
Wisconsin Knitting Mill Co., Sweaters	3	....	8	7	15	....	1	100
Total	151	23	1450	425	1875	52	58	4612
MARENGO, ASHLAND CO.—								
Marengo Brick Co., Brick	2	....	30	....	30	6	2	50

ESTABLISHMENTS INSPECTED.

Location, Name and Business.	Buildings.		Employes.				Boilers.	
	Under 3 stories	Three or more stories.	Male.	Female.	Total.	Under 16 yrs. of age	Number.	Total horse power.
MARINETTE, MARINETTE CO.—								
Hamilton & Merryman Co., Shingle & Planing	7	....	200	....	200	....	12	650
Lehr & Noll Shingle Co., Shingles & Planing...	....	....	10	....	10	....	1	40
Linden & Miller, Sash & Doors	2	....	20	....	20	....	1	70
Ludington, N., Co., Lumber	5	....	75	....	75	....	5	880
Marinette Flour Mill Co., Flour & Feed	....	1	10	....	10	....	....	....
Marinette Lumber Co., Lumber, Boxes, etc.	11	....	175	....	175	15	9	600
Marinette & Menominee Box Co., Boxes	4	....	75	....	75	26	2	180
Marinette & Menom. Paper Co., Paper & Pulp	13	....	301	28	329	....	7	770
Merryman, R. W. & Co., Lumber	3	....	85	....	85	....	6	360
Sawyer, Goodman & Co., Lumber & Planing.	5	....	150	....	150	....	6	677
Whitbeck, H. Co., Lumber & Lath	6	....	175	....	175	1	7	600
Total	56	1	1276	28	1304	42	56	4827
MARSHFIELD, WOOD CO.—								
Bast Bros., Soda Water	1	....	3	....	3	....	....	....
Bille, Hans, Contractor	2	....	18	....	18	....	1	35
Democrat Publishing Co., Printing	1	....	5	....	5	1	....	....
Hafer & Kalsched, Lumber & Planing	2	....	12	....	12	....	1	50
Marshfield Bedding Co., Mattresses & Springs	5	....	29	6	35	2	2	140
Marshfield Boiler Works, Boilers	1	....	3	....	3	....	....	....
Marshfield Brewing Co., Brewery	10	....	20	....	20	1	2	100
Marshfield Elec. Lt. & Pow. Co., Lt. & Power	2	....	4	....	4	....	2	200
Marshfield Iron Works, Foundry & Machines.	2	....	11	....	11	....	....	....
Marshfield Land & Lbr. Co., Lbr. & Planing.	7	....	125	....	125	....	6	400
Marshfield News, Printing	1	....	4	3	7	1	....	....
Marshfield Stave Co., Barrels, Excelsior, etc.	4	....	20	....	20	2	1	125
Marshfield Steam Laundry, Laundry	1	....	2	4	6	....	1	10
Marshfield Times, Printing	1	....	4	2	6	....	....	....
Mattelka Bros., Plumbing, etc.	1	....	6	....	6	....	....	....
Rasmussen, Peter, Flour & Feed	1	1	3	....	3	....	1	60
Roddis Lumber & Veneer Co., Cheese Boxes & Veneer	6	....	139	1	140	16	3	180
Upham Mfg. Co., Furniture	4	....	190	....	190	27	6	500
Upham Mfg. Co., Flour & Feed	....	2	6	....	6	1	....	....
Total	52	3	604	16	620	51	26	1800
MASON, BAYFIELD CO.—								
White River Lumber Co., Lumber	7	....	213	2	215	5	9	900
MAUSTON, JUNEAU CO.—								
City Water Co., Water	1	....	1	....	1	....	1	70
Curran Bros., Elevator	....	1	3	....	3	....	....	....
Juneau Co. Chronicle, Printing	1	....	3	....	3	....	....	....
Mauston Electric & Power Co., Lt. & Power.	1	....	1	....	1	....	1	150
Mauston Milling Co., Flour	....	1	4	1	5	....	....	....
Mauston Star, Printing	1	....	2	1	3	....	....	....
Mauston Steam Laundry, Laundry	1	....	1	1	2	....	1	10
Mauston Woolen Mill, Woolens	1	....	1	2	3	....	1	10
Radell, F. & Co., Wagons & Carriages	1	....	3	....	3	....	1	16
Severance, F, Repair Shop. Repairs	1	....	2	....	2	....	....	....
Stafford & Goldsmith, Pickles	2	....	5	....	5	....	....	....
Underwood, F. A., Cooperage	3	....	4	....	4	....	1	12
Total	13	2	30	5	35	....	6	268
MAYVILLE, DODGE CO.—								
Badger Sewing Co., Overalls	1	....	2	23	25	....	....	....
Boehmer Bros., Machine Shops	5	....	2	....	2	....	1	20
Buerger Malting Co., Malt	5	3	10	....	10	....	2	160
Dodge County Banner, Printing	1	....	6	....	6	....	....	....
Dodge County Pioneer, Printing	1	....	6	....	6	....	....	....
Fire Starter Co., Fire Starter	2	....	4	....	4	....	1	20

ESTABLISHMENTS INSPECTED.

Location, Name Business.	Buildings. Under 3 stories.	Buildings. Three or more stories.	Employes. Male.	Employes. Female.	Employes. Total.	Employes. Under 16 yrs. of age.	Boilers. Number.	Boilers. Total horse power.
MAYVILLE—Continued.								
Hollister, John, & Co., Wagons	3	....	8	....	8	....	1	18
Matson & Setel, Machine Shops	1	....	2	....	2	....	1	100
Mayville News, Printing	1	....	2	2	4	....	....	....
Mayville Saw Mill, Lumber	2	....	2	....	2	....	....	....
Mayville Specialty Mfg. Co., Foundry	1	....	6	....	6	....	1	8
Mayville Steam Laundry, Laundry	1	....	1	2	3	....	....	....
Northwestern Iron Co., Iron	9	....	125	....	125	....	9	1500
Paustian, F., Milling Co., Flour	2	1	4	....	4	....	1	15
Rock River Creamery, Creamery	1	....	2	....	2	....	1	45
Steger, J., & Co., Brewery	7	....	5	....	5	....	1	12
Ziegler, M., Brewing Co., Brewery	3	2	4	....	4	....	1	18
Total	46	6	191	27	218	....	20	1916
MEDFORD, TAYLOR CO.—								
Campbell & Anschultz, Machine Shops	4	....	10	....	10	....	....	....
Heinrich, J., Wagons	1	....	5	....	5	....	....	....
Medford Brewing Co., Brewery	6	2	8	....	8	....	1	75
Medford Bldg. Supply Co., Bldg. Supplies	6	....	10	....	10	....	1	80
Medford Elec. Light Plant, Light	1	....	2	....	2	....	1	80
Medford Mfg. Co., Lumber	12	....	75	....	75	....	4	400
Medford Steam Laundry, Laundry	1	....	1	3	4	....	1	6
Perkins, A. J., & Son, Flour	2	1	3	....	3	....	1	80
Portman & Edwards, Baskets	4	....	43	15	58	7	1	80
Schattuck, J. R, Printing	1	....	3	1	4	....	....	....
Star-News, Printing	1	....	3	1	4	....	....	....
U. S. Leather Co., Tannery	13	....	75	....	75	....	6	900
Waldbot—Der, Printing	1	....	3	....	3	....	....	....
Weekly Clarion, Printing	1	....	2	1	3	....	....	....
Wesle Bros., Wagons	4	....	10	....	10	....	1	12
Total	58	3	253	21	274	7	17	1713
MENASHA, WINNEBAGO CO.—								
Fox River Valley Knitting Co., Knitting	2	1	5	35	40	....	....	....
Gilbert Paper Co., Paper	7	4	103	47	150	....	5	1200
Howard, C. W., Co., Paper	14	....	95	15	110	....	7	800
McKenna Excelsior Co., Excelsior	4	....	19	1	20	....	1	100
Menasha Brewing Co., Brewery	7	1	1	....	1	....	1	75
Menasha Woodenware Co., Woodenware	73	3	1000	....	1000	73	7	2000
Menasha W. S. P. Co., Wood Pulley	13	1	25	....	25	....	2	80
Schneider, John, Sash & Doors	4	....	10	....	10	....	....	....
Strange, John, Paper Co., Paper	4	....	30	15	45	....	2	750
Walter Bros., Brewery	7	3	14	....	14	....	2	200
Total	135	13	1302	113	1415	73	27	5205
MENOMONIE, DUNN CO.—								
Anderson, Chas., Foundry	1	....	8	....	8	....	1	20
Burkhart & Son, Brewery	1	....	5	....	5	....	1	50
C., St. P., M. & O. Ry., Round House	1	....	1	....	1	....	1	20
Dunn Co. Iron Works, Shops	2	....	5	....	5	....	1	20
Dunn Co. News, Printing	1	....	6	....	6	....	....	....
Dunn Co. Sash & Door Co., Sash & Doors	3	....	15	....	15	....	1	40
Excelsior Brick Co., Brick	6	....	75	....	75	8	2	190
Hanschel, V. L., Repairs	1	....	2	....	2	....	....	....
Heintz Bros., Wagons	1	....	7	....	7	....	1	10
Herrum, C. L., Sash & Doors	1	....	7	....	7	....	1	35
House, J. K., Feed	1	....	2	....	2	....	1	30
Knapp Stout Co., Flour	1	1	8	....	8	....	....	....
Lutz, J. B., Bottling	1	....	2	....	2	....	....	....
Menomonie Elec. Light Co., Light	2	....	5	....	5	....	2	200
Menomonie Hydraulic Brick Co., Brick	20	....	360	....	360	....	4	420
Menomonie Milling Co., Flour	....	1	4	....	4	....	....	....
Menomonie Steam Laundry, Laundry	1	....	5	....	5	....	1	12

ESTABLISHMENTS INSPECTED.

Location, Name and Business.	Buildings.		Employes.				Boilers.	
	Under 3 stories.	Three or more stories.	Male.	Female.	Total.	Under 16 yrs. of age.	Number.	Total horse power.
MENOMONIE—Continued.								
Menomonie Times, Printing	1	....	5	2	7	....	....	....
Menomonie Water Co., Water	1	....	2	....	2	....	1	80
Schmidt, A. H, Wagons	2	....	8	....	8	....	1	25
Submerged Electric Ry., Power	....	1	50	....	50	....	....	....
Wisconsin Elevator Co., Elevator	....	1	2	....	2	....	....	....
Wisconsin Red Pressed Brick Co., Brick	7	....	80	....	80	10	1	100
Total	55	4	664	2	666	18	20	1252
MERCER, IRON CO.—								
Mercer Lumber Co., Lumber	4	....	30	....	30	....	7	700
MERRILL, LINCOLN CO.—								
American Hide & Leather Co., Tannery	11	....	45	....	45	....	3	300
American Water Works & Guar. Co., Water	3	....	4	....	4	....	2	150
Anson-Hixon Sash & Door Co., S. & Doors	5	1	188	....	188	18	2	350
Barber & Single, Excelsior	2	....	5	....	5	....	....	....
Gilkey & Anson Co., Lumber & Boxes	12	....	174	....	174	8	8	600
Hone, D. A., Laundry	1	....	3	6	9	1	1	25
Leidiger Brewing Co., Brewery	4	....	7	....	7	....	1	50
Merrill Excelsior Co., Excelsior	3	....	9	....	9	....	1	60
Merrill Glove & Mitten Co., Gloves & Mittens	1	....	2	5	7	....	....	....
Merrill Iron Works, Foundry & Machines	3	....	8	1	9	....	....	....
Merrill Lumber Co., Lumber & Planing	11	....	214	....	214	2	7	650
Merrill Ry. & Lighting Co., Light & Power	3	....	9	....	9	....	....	....
Merrill Star, Printing	1	....	2	2	4	....	....	....
Miller, C. P., & Co., Planing Mill	6	....	36	....	36	....	1	70
Stange, A. H., & Co., Sash & Doors	16	2	630	....	630	50	12	800
The Merrill Advocate, Printing	1	....	3	1	4	....	....	....
The Merrill Bottling Works, Sodawater	1	....	3	....	3	....	1	5
Wisconsin Thal., Printing	1	....	3	2	5	....	....	....
Wright, H. W. Lumber Co., Lumber	11	1	130	1	140	....	7	500
Total	96	4	1484	18	1502	79	46	3560
MILWAUKEE, MILWAUKEE CO.—								
Abel & Bach Co., Trunks	2	4	275	86	361	65	2	100
Abeles, F. E. & Co., Pants, Shirts, etc.	....	1	9	35	44	2	....	....
Abresch, Chas., Co., Wagons, etc.	1	4	140	....	140	....	2	150
Ackerman, R. A., Shoes	1	....	40	10	50	2	1	40
Acme Laundry Co., Steam Laundry	....	1	5	19	24	2	....	....
Acme Pattern & Mfg. Co., Patterns, etc.	1	....	6	....	6	....	....	....
Adams, F. F., Tobacco Co., Tobacco stock	....	2	106	44	150	17	2	150
Allis-Chalmers Co., Foundry	6	....	385	....	385	....	2	160
Allis-Chalmers Machine Shops, Machines	9	4	2500	12	2512	....	9	400
Amazeen & Co., Shoes	....	1	52	18	70	4	....	....
Ambrosia Chocolate Co., Chocolate	2	....	2	5	7	....	1	100
American Boiler Works, Boilers	1	....	5	....	5	....	....	....
American Box Toe Co., Box Toes	....	1	12	3	15	1	....	....
American Bridge Co., Bridges	3	....	133	....	133	2	2	320
American Can Co., Tinware	....	1	....	....	....	28	....	....
American Candy Co., Candy	....	1	47	82	129	71	1	80
American Hide & Leather Co., Tannery	13	3	350	....	350	....	4	325
American Malt Co., Malt	....	4	15	....	15	....	....	....
American Malt Co., Malt	3	8	60	....	60	....	7	900
American Monolith Co., Flooring	1	....	10	....	10	....	1	50
American Show Print Co., Printing	....	1	56	6	62	5	....	....
American Steam Laundry, Steam Laundry	....	1	5	20	25	4	....	....
Anchor Line, Transportation	1	....	75	....	75	....	....	....
Andrae, Jule & Sons, Electricians	1	....	7	....	7	....	....	....
Andrae, Jule & Sons, Electricians	1	....	36	5	41	....	....	....
Andrews, Fred, Cut Stone	6	....	50	....	50	....	2	300
Armstrong, W. J., Co., Grain	....	1	3	....	3	....	....	....
Alexson, Theo. M., Patterns	1	....	3	....	3	....	....	....

ESTABLISHMENTS INSPECTED.

Location, Name and Business.	Buildings.		Employes.				Boilers.	
	Under 3 stories.	Three or more stories.	Male.	Female.	Total.	Under 16 yrs. of age.	Number.	Total horse power.
MILWAUKEE—Continued.								
Badger Candy Co., Candy	....	1	14	37	51	....	....	....
Badger Dye Works, Dyeing and Cleaning	3	....	4	12	16	....	1	30
Badger Laundry Co., Steam Laundry	1	....	6	14	20	....	1	40
Badger Mfg. Co., Skirts	1	....	5	....	5	....	....	....
Badger Nail Co., Nails	8	....	20	....	20	3	2	160
Bailey, Wm., & Sons, Foundry	....	1	200	....	200	....	2	60
Banker, C. L., Wire & Iron Works	....	1	12	....	12	1	1	8
Barkow, H., Wagons	1	....	10	....	10	....	....	....
Barth, J. H., Trunks	1	....	3	....	3	....	....	....
Barth Mfg. Co., Elevator	5	1	40	1	41	....	2	160
Banmbach, Reichel Co., Brewery Supplies	....	1	5	....	5	....	....	....
Bay View Steam Laundry, Laundry	1	....	4	8	12	....	....	....
Bay View Steel Casting Co., Castings	1	....	30	....	30	....	1	60
Beach & Tonnsen, Galvanized Iron	1	....	10	....	10	....	....	....
Beals & Torrey Shoe Co., Shoes	....	1	70	30	100	1	2	140
Beck, C. A., & Son, Planing Mill, Boxes	12	....	130	....	130	6	2	300
Bellack, Chas. H., & Co., Clothing	....	1	37	20	57	6	....	....
Benesch Bros., Scrap Iron	5	....	60	10	70	....	1	30
Berger Bedding Co., Bedding	....	2	39	10	49	....	1	75
Berthelet Esch, Sewer Pipe	1	....	20	....	20	....	....	....
Beyer, John, & Son, Wood Works	1	....	1	....	1	....	1	10
Biersack Mfg. Co., Stamp Protectors	1	....	2	....	2	....	....	....
Biersack & Neidermeyer Co., Iron Roofing	1	....	28	....	28	....	....	....
Birkenwald, S., Co., Brewery Supplies	1	....	5	....	5	....	....	....
Blatz, Val., Brewing Co., Brewery	13	7	597	58	655	41	12	1800
Bodden & Bright Co., Spices	1	....	2	....	2	....	1	15
Bodden Packing Co., Packing House	7	....	150	....	150	....	3	180
Boehm, J., Stove Repairs	....	1	16	1	17	2	....	....
Boenstein & Zimmerman, Skirts & Coats	....	1	8	6	14	....	....	....
Boessger & Wittez, Apparatus	1	....	3	....	3	....	....	....
Bogenberger, F., & Bro., Galvanized Iron	1	....	8	....	8	....	....	....
Boston Store, Dry Goods	....	1	....	....	....	29	....	....
Bradley Shoe Co., Shoes	....	1	200	100	300	25	....	....
Brandt, C. B., Mfg. Co., Ammonia, etc.	1	....	....	....	....	3	2	225
Brandt Stove Co., Stoves	4	2	174	1	175	....	....	....
Brazell, Jas. G., Printing	1	....	7	1	8	3	....	....
Breithoupt Printing Co., Printing	....	1	12	....	12	1	....	....
Brill, J. P., Co., Plate Glass	1	....	15	....	15	....	....	....
Brown-Bouton Glove Co., Gloves	1	....	33	61	94	4	....	....
Brown-Corliss Engine Co., Machinists	1	....	14	....	14	....	....	....
Brown, I. H., & Co., Wagons & Carriages	....	1	28	....	28	....	....	....
Brown, P. J., Glove Co., Gloves	1	....	17	26	43	3	....	....
Browning Mfg. Co., Castings	1	....	100	8	108	6	....	....
Bueler, Andrew, Printing	....	1	3	....	3	1	....	....
Buestrin, Henry, Contractor	1	....	45	....	45	....	....	....
Bulfen, Ed., Printing	....	1	12	....	12	....	....	....
Burdick & Allen, Printing	....	1	23	1	24	....	....	....
Burnham Bros., Brick	8	....	100	....	100	....	3	300
Burroughs, Geo., & Sons, Trunks	....	1	15	....	15	2	....	....
Campbell Laundry Co., Laundry	1	....	10	58	68	1	2	100
Canar Bros., Laundry	....	1	1	6	7	....	1	35
Cannon Printing Co., Printing	....	1	43	14	57	4	....	....
Carnival Laundry, Laundry	1	....	4	10	14	2	1	60
Carow Stove Polish Co., Stove Polish	2	....	7	3	10	....	....	....
Carpees, P. Co., Trunks	....	1	74	16	90	6	2	120
Carpenter-Skyles Baking Co., Bakery	2	1	49	7	56	1	1	60
Central Wood Works Co., Wood Work	2	1	3	....	3	....	....	....
Chain Belt Co., Chain Belts	1	1	100	....	100	47	....	....
Chi., Mil. & St P. R R. Shops, Transportation	51	1	3025	3	3028	5	9	1600
Chi., Mil. & St. P. Freight Depot, Depot for Freight	4	....	313	1	314	....	....	....
Chi., Mil. & St. P. Shops, Transportation	3	....	50	....	50	....	....	....
Christenson, N. A., Pattern	1	....	4	....	4	....	....	....
Citizen Co., Printing	....	1	4	....	4	....	....	....
Clark Engraving Co., Engraving	....	1	28	4	32	....	....	....

ESTABLISHMENTS INSPECTED.

Location, Name and Business.	Buildings.		Employes.				Boilers.	
	Under 3 stories.	Three or more stories.	Male.	Female.	Total.	Under 16 yrs. of age.	Number.	Total horse power.
MILWAUKEE—Continued.								
Cohen Bros., Clothing	....	1	5	....	5	....	....	....
Colnick, C., Mfg. Co., Ornamental Iron	1	....	27	....	27	1	....	....
Columbia Knitting Co., Knitting	....	1	11	13	24	....	....	....
Columbia Publishing Co., Printing	....	1	2	....	2	....	....	....
Commercial Blank-book Co., Blank-books	....	1	9	21	30	5	....	....
Comrie, J., Glove Co., Gloves	....	1	15	....	15	....	....	....
Conrad Bros., Leather	2	1	100	....	100	....	2	150
Conway Cabinet Co., Veneered Doors, etc.	7	....	126	....	126	4	2	120
Cornillie Bros., Wood-work	3	3	25	....	25	....	....	....
Corrigan, Edw. H., Bindery	....	1	2	9	11	1	....	....
Cox, Jos. L., Metal	1	....	4	....	4	....	....	....
Cream City Brewing Co., Brewery	9	4	50	....	50	....	3	250
Cream City Can Works, Cans	1	....	40	6	46	6	....	....
Cream City Casket Co., Caskets	1	....	6	....	6	....	1	40
Cream City Laundry, Laundry	....	1	11	44	55	3	1	100
Cream City Marine Boiler Co., Boilers	1	....	6	....	6	....	....	....
Cream City Mfg. Co., Steel Stamping	1	1	60	6	66	5	....	....
Cream City Sash & Door Co., Sash & Doors	1	1	100	....	100	8	2	500
Cream City Woven Wire Works, Wire	2	1	58	2	60	6	3	240
Crescent Knitting Co, Knitting	1	....	8	35	43	5	....	....
Crucible Steel Casting Co., Steel Foundry	3	....	20	....	20	....	....	....
Crystal Soap Co., Soaps	1	....	10	17	27	5	1	40
Curtis & Yale Co., Sash, Doors, etc.	5	....	12	....	12	....	....	....
Cutts, E. M., Paper Specialty Co., Paper Specialties	....	1	8	20	28	4	1	70
Dahinden & Gallasch, Vinegar	....	1	2	....	2	....	2	48
Daily News, Printing	....	1	56	5	61	1	....	....
Daisy Roller Mills, Flour	1	2	60	5	65	....	3	180
Dauss Bros. Mfg. Co., Boilers	1	....	30	....	30	....	1	35
Davis Bros. Mfg. Co., Boilers	1	....	35	....	35	....	2	150
Davis, H. N., Plating	....	1	10	....	10	....	....	....
Dawe Bros. Printing Co., Printing	....	1	14	1	15	....	....	....
Dedi, G. J., Tailors	1	....	1	1	2	....	....	....
Deguenther Laundry Co., Laundry	....	1	5	23	28	1	1	60
Delaney Oil & Lubricating Co., Grease	1	....	8	2	10	....	1	20
Dever Bros. Paper Co., Paper	....	1	4	....	4	....	....	....
Diamond Ink Co., Inks	2	....	8	17	25	2	1	5
Doctor Bros. & Hornung, Tailors	1	....	6	....	6	....	....	....
Doelger & Kirsten, Machinists	2	....	25	....	25	1	1	40
Domacnost Pub. Co., Printing	....	1	3	1	4	....	....	....
Domestic Laundry Co., Laundry	....	1	2	6	8	....	....	....
Domminick, John, Clothing	1	....	6	20	26	....	....	....
Dorsch, John, & Sons, Repair	1	....	5	....	5	....	....	....
Dreher, Jacob, & Co., Printing	....	1	7	....	7	1	....	....
Duluth Roller Mills, Flour	1	2	15	....	15	....	....	....
Dutcher Foundry Co., Foundry	4	....	100	....	100	....	2	125
Dutcher, J. A. & P. E., Steel Works	5	....	100	....	100	....	2	160
Dyer Saddlery Co., Saddles	....	1	22	....	22	....	....	....
Eagle Lye Works, Lye	....	1	25	15	40	9	1	50
Erie Steamboat Line, Transportation	1	....	16	1	17	....	....	....
Ellsworth & Thayer, Coats & Gloves	....	1	49	57	106	....	1	28
Empire Laundry, Laundry	2	....	4	8	12	....	1	80
Engel, H. F., Tannery	3	....	22	3	25	1	1	60
Enterprise Box & Lumber Co., Boxes	8	....	180	....	180	36	3	400
Eureka Laundry, Laundry	1	....	12	41	53	....	2	80
Everly, J. M., Printing	....	1	12	....	12	2	....	....
Excelsior Publishing Co., Printing	....	1	8	....	8	1	....	....
Fiarbanks, Morse & Co., Repairing Scales	1	....	2	....	2	....	....	....
Faust Mfg. Co., Printing Machinery	....	1	5	1	6	....	....	....
Federal Mfg. Co., Steel Metal Stamping	1	2	481	3	484	23	6	480
Feix & Goethel Co., Tin Shops	....	1	10	....	10	....	....	....
Fernekes, J., Co., Candy	....	1	18	30	48	3	....	....
Figved Bros., Fur Dressing	2	....	10	....	10	....	1	15
Fillmann Bros., General Repairing	1	....	3	....	3	....	....	....
Fillmann Bros., General Repairing	1	....	3	....	3	....	....	....

ESTABLISHMENTS INSPECTED.

Location, Name and Business.	Buildings.		Employes.				Boilers.	
	Under 3 stories.	Three or more stories.	Male.	Female.	Total.	Under 16 yrs. of age.	Number.	Total horse power.
MILWAUKEE—Continued.								
Fixter, Jos., Cooperage Co., Cooperage	3	....	44	....	44	....	....	....
Fleischman & Co., Yeast Packing	....	1	8	4	12	....	....	....
Foelske, H. E., Confectionery	....	1	1	....	1	....	....	....
Forest Home Monument Co., Monuments	1	....	4	....	4	....	....	....
Forward Mach. & Tool Co., Tools & Patterns	2	....	30	....	30	....	1	50
Frank, L., & Son Packing Co., Sausage, etc.	....	1	50	2	52	12	2	100
Franzen, Wm., & Son, Glass Works	6	....	225	....	225	57	2	160
Frees, John, Awnings	1	....	....	2	2	....	....	....
French Wax Figure Co., Wax Figures	....	1	6	19	25	....	....	....
Friedlander Knitting Co., Knitting	....	1	3	156	159	24	....	....
Friend & Marks, Clothing	....	1	11	35	46	2	....	....
Friend Bros. Clothing Co., Tailors	....	1	16	24	40	2	....	....
Froedert Bros., Malt	8	4	23	....	23	....	3	280
Galland-Henning Co., Iron Works	1	....	75	....	75	....	1	150
Gallun, A. F., & Son, Tannery	12	7	449	1	450	6	8	600
Gavin Art Glass Works, Glass Works	2	....	15	....	15	1	....	....
Gem Hammock & Fly Net Co., Hammocks, etc.	....	1	300	200	500	65	3	225
Gem Laundry, Laundry	....	1	3	11	14	....	....	....
Gem Milling Co., Flour	1	1	12	....	12	....	3	120
General Construction Co., Stone Works	5	....	35	....	35	....	1	35
General Construction Co., Stone Mill	2	....	35	....	35	....	1	50
Gentz & Schroeder, Carriages	1	....	6	....	6	....	....	....
Gerlach, Wm., & Co., Malt	3	2	43	....	43	....	2	300
Gether, Drebert & Perkins Co., Printers' Sup.	....	1	25	1	26	....	....	....
Gettleman, A., Co., Brewery	10	2	80	....	80	1	3	240
Gender & Paeschke Mfg. Co., Tinware	5	2	427	125	552	64	3	425
Gillett & Co., Printing	....	1	14	....	14	3	....	....
Globe Wire & Iron Works, Wire & Iron	2	....	24	1	25	3	1	30
Goerres, Phillip, Cooperage Co., Cooperage	4	....	40	....	40	....	1	85
Goodrich, A. S. & Co., Oil	3	....	20	....	20	....	1	130
Goodrich Transportation Line, Transportation	1	....	23	1	24	....	....	....
Gorenstein Bros., Scrap Iron & Rags	1	....	3	5	8	....	....	....
Graf, John, Soft Drinks	4	....	60	....	60	2	1	35
Grand Chemical Co., Chemicals	1	....	1	1	2	....	....	....
Grand Trunk Ry. System, Transportation	1	....	16	....	16	....	....	....
Grant Marble Co., Monuments	5	....	129	1	130	....	2	200
Graves-Seaman Parlor Tramels, Furniture	1	....	70	....	70	....	1	80
Grasselli Chemical Co., Chemicals	2	....	4	1	5	....	1	10
Great Western Knitting Co., Knitting	....	1	6	58	64	7	....	....
Greene's Stamp & Printing, Printing Stamps	....	1	6	....	6	....	....	....
Greenslade Foundry Co., Foundry	3	....	125	....	125	....	....	....
Gregg & Thomann, Laundry	....	1	4	35	39	....	1	60
Greve Show Printing Co., Printing	....	1	34	....	34	....	....	....
Grocers' Roasting Co., Coffee Roasting	....	1	6	....	6	....	....	....
Gross, J., & Sons, Coal Yards	4	....	75	2	77	....	3	270
Gruhl Sash & Door Co., Sash & Doors	5	....	60	....	60	....	2	150
Gurnz, R., Co., Packing-house	11	2	80	....	80	....	3	300
Habhegger, Theo., Carriages & Wagons	2	....	13	....	13	....	....	....
Hackendahl & Schmidt, Machinists	1	....	5	....	5	....	....	....
Hake, F. D., Printing	....	1	6	....	6	....	....	....
Hammersmith Engravings, Engraving	....	1	12	4	16	....	....	....
Hann-Wangerin Weickhashls, Church Furn.	1	....	30	....	30	....	....	....
Hansen's Empire Fur Factory, Furs	....	1	40	60	100	2	....	....
Hansen, O. C., Mfg Co., Gloves	....	1	70	85	155	5	....	....
Hanser, John & Sons, Soap	1	....	5	....	5	....	1	25
Hasse, Chas. F., Coal Co., Coal Yard	2	....	20	....	20	....	1	80
Hathaway, J. E. & Co., Pile Driving, etc.	2	....	40	....	40	....	....	....
Hays, George, Packing Boxes	1	....	14	....	14	1	1	30
Hebenstreit & Bartelt, Furniture	2	....	24	1	25	1	....	....
Heiman, M., & Co., Millinery	....	1	40	138	178	2	....	....
Heiman Cloak Co., Cloaks	....	1	1	21	22	2	....	....
Heinl, Jos., & Sons, Carriages & Wagons	1	....	20	....	20	....	1	50
Hendee Wire Brush Co., Brushes	....	1	23	1	24	11	....	....
Hennecke, C., Co., Stationery	....	1	52	2	54	18	....	....
Henes & Keller Co., Machinists	....	1	12	....	12	....	....	....

ESTABLISHMENTS INSPECTED.

Location, Name and Business.	Buildings.		Employes.				Boilers.	
	Under 3 stories.	Three or more stories.	Male.	Female.	Totel.	Under 16 yrs. of age.	Number.	Total horse power.
MILWAUKEE—Continued.								
Henschel, C. B., Mfg. Co., Cigar Boxes	1	1	35	90	125	35	1	66
Henson-Hoff Malt Co., Elevators	....	1	36	....	36	....	3	450
Hepfinger, Louis, Machinists	1	....	2	....	2	....	....	....
Hess, W. A., Linotype Co., Linotype	....	1	4	2	6	....	....	....
Heyer, Geo. & Co., Furniture	....	1	45	1	46	2	....	....
High Service Pumping Station, Pumping Sta.	1	....	14	....	14	....	4	400
Hilbert, A. J., & Co., Perfumes	....	1	16	16	32	1	....	....
Hilty, M., Lumber Co., Lumber & Boxes	5	1	90	....	90	2	3	450
Hirsch Bros., Agricultural Imp.	2	1	25	....	25	....	1	30
Hock, John & Co., Plating	1	....	3	....	3	....	....	....
Hoelzl & Co., Printing	1	....	9	....	9	....	....	....
Hoffman & Billings, Machinery	4	2	275	25	300	30	3	250
Hoffman, B., Mfg. Co., Foundry	7	....	119	....	119	3	2	120
Hoffman & Baur, Sheet Metal	....	1	30	....	30	....	....	....
Hottelet & Co., Malsters	1	2	8	....	8	....	1	90
Hoyer, Edwin P., Printing	....	1	3	....	3	....	....	....
Hoyt Mfg. Co., Ranges, etc.	2	1	40	....	40	1	1	80
Hught Mfg. Co., Foundry	2	....	75	....	75	....	....	....
Hummel & Downing, Paper Boxes	....	1	15	10	25	3	....	....
Husting Co., E. L., Brewery	3	....	25	....	25	....	2	125
Hustler Pattern Works, Patterns	1	....	3	....	3	....	....	....
Hyman, Bauer & Neuman, Shirts, Pants, etc.	....	1	12	53	65	1	....	....
Ideal Steam Laundry, Laundry	2	....	9	33	42	....	1	65
Illinois Leather Co., Tannery	6	....	19	....	19	....	2	200
Illinois Steel Co., Iron & Steel	10	....	1300	1	1301	....	28	3600
Independent Brewing Co., Brewery	2	....	28	....	28	2	2	130
Independent Fuel Co., Coal & Wood	1	....	30	....	30	....	2	80
Interior Wood Work Co., Sash & Doors	1	1	85	....	85	13	2	125
International Harvester Co., Harvesting Machinery	15	7	730	....	730	15	6	700
Jacobs, K. W., Cooperage	7	....	32	1	33	2	1	65
Jalass, H. V., Boxes	1	....	9	....	9	....	1	60
Jenkins, W. F., & Co., Blank Books	....	1	13	40	53	12	....	....
Jenson, H. H., Patterns	1	....	5	....	5	....	....	....
Jewett & Sherman, Coffee & Spices	....	1	35	10	45	1	1	65
Johns, H. W., Manville Co., Magnesia Pipe Covering	5	3	312	33	345	5	10	1220
Johnson, B. J., Soap Co., Soap	1	1	55	34	89	9	3	265
Johnson, Robert J., Confectionery, etc.	....	1	100	240	340	40	2	125
Johnson Service Co., Electric Specialties	1	1	223	2	225	7	....	....
Jones, E. P., & Bro., Corks	3	....	9	....	9	....	1	40
Joys Bros. & Co., Awnings	....	1	14	10	24	....	....	....
Jung Brewing Co., Brewery	7	6	110	10	120	....	3	300
Kaempf, Fred, Coppersmith	1	....	9	....	9	1	....	....
Kaestner, A. J., Carriages & Wagons	1	....	10	....	10	....	....	....
Kalamazoo Knitting Co., Knitting	1	2	60	388	448	63	3	350
Kalt-Zimmer Mfg. Co., Infants' Shoes	....	2	50	75	125	8	....	....
Kempf-Smith Mfg. Co., Machinists	1	....	65	....	65	....	1	60
Ketter, Fred, Cooperage	3	....	40	....	40	....	1	60
Kieckhefer, A., Elevator Co., Elevators	5	....	30	....	30	....	1	50
Kipp, B. A., Co., Furniture	3	....	57	3	60	....	1	60
Klawing, J., & Co., Book-bindery	....	1	1	5	6	2	1	50
Kling, Geo. B., Harness	1	1	3	22	25	6	....	....
Knauber, J., Lithograph Co., Lithographers	....	1	45	7	52	7	....	....
Knebel, H. P., Furniture	1	....	12	....	12	....	....	....
Koeber & Balstone, Shoes	1	....	48	12	60	1	1	50
Kopperud, Andrew, Iron Works	2	....	20	....	20	....	1	150
Krantz, Chas., Brick Co.	6	....	55	....	55	....	1	100
Kraus Landon Co., Printing	....	1	11	2	13	2	....	....
Kraus Shoe Co., Boots & Shoes	....	1	20	10	30	....	....	....
Krause & Co., Malting	....	2	4	....	4	....	1	75
Krause & Schneck, Machinists	1	....	10	....	10	....	1	12
Kremers-Urban Co., Chemicals	....	1	11	....	11	1	....	....
Krislinger, J. P., Co., Liquor House	....	1	6	....	6	....	....	....
Kropp, E. C., Printing	....	1	4	....	4	....	....	....

ESTABLISHMENTS INSPECTED.

Location, Name and Business.	Buildings.		Employes.				Boilers.	
	Under 3 stories.	Three or more stories.	Male.	Female.	Total.	Under 16 yrs. of age.	Number.	Total horse power.
MILWAUKEE—Continued.								
Kruecke Bros. Mfg. Co., Brass Goods	1	....	27	2	29	....	....	....
Krueger & Domann, Printing	....	1	10	....	10	....	....	....
Krueger Mfg. Co., Machinists	1	....	6	....	6	....	....	....
Krus, Frank, Photo. Engraving	....	[illegible]	10	....	10	....	....	....
Kuenzli, H., & Co., Salt	1	....	3	....	3	....	....	....
Kundmann, W., Book-bindery	....	1	4	5	9	1	....	....
Kunz, J. L., Machinists	....	1	5	....	5	....	....	....
Kuryer Publishing Co., Printing	....	1	26	2	28	3	....	....
Ladwig, Walter F., Barber Supplies	....	1	3	....	3	....	....	....
Lamp & Miller Mfg. Co., Brass	2	....	25	....	25	....	....	....
Landon Electrotype Co., Electrotyping	....	1	6	3	9	2	....	....
Lange, A., Mfg Co., Saloon Fixtures	2	....	15	....	15	....	1	35
Langenberger, John, Contractors & Builders	1	....	20	....	20	....	1	100
Lauenstein, Gustav, Shoes	1	....	7	....	7	1	....	....
Lawrence, Christian, Wagons, etc.	1	....	4	....	4	....	....	....
Lawrence Bros. Macaroni Co., Macaroni	....	1	12	....	12	4	1	50
Leader Card Works, Stationery	....	1	5	7	12	1	....	....
Lehigh Valley Trans. Co., Warehouse	2	....	30	....	30	....	....	....
Leibenberg, A., & Son, Junk	....	1	4	2	6	....	....	....
Lemke, Aug. F., Broom Co., Brooms	1	....	11	....	11	....	....	....
Levenson, Max, Caps, etc.	....	1	2	1	3	....	....	....
Liedersdorf, B., Co., Tobacco	....	1	75	150	225	....	2	125
Lindeman, A. J., & Hoverson, Sheet Metal	11	2	300	2	302	30	2	250
Lindemann, J. P. & Sons, Sheet Metal, etc.	....	1	20	....	20	4	1	40
Lindsay Bros., Threshers	1	....	15	....	15	....	1	40
Linx, Wm., Hide Curing	1	....	10	....	10	....	....	....
Liquid Carbonic Acid Co., Carbonic Acid	1	....	17	1	18	....	....	....
Loeffelholz & Co., Brass Foundry	3	....	23	....	23	....	1	70
Loewenbach, B., & Son, Printing	....	1	12	8	20	....	1	23
Logeman Bros., Machinists	1	1	30	....	30	....	1	25
Lohr & Weifenbach, Monuments	1	....	10	....	10	....	....	....
Lowe, L., Co., Barber Supplies	....	1	11	....	11	....	....	....
Lull, C. R., Elevator Co., Grain	5	1	9	....	9	....	2	280
Lund, G., Lime	1	....	6	....	6	....	....	....
Lutter & Gies, Machinists	1	....	35	....	35	....	1	35
Maerker, Schulz & Co., Curled Hair	1	....	4	....	4	....	....	....
Mahler, Ahlenberg & Co., Clothing	....	1	40	75	115	4	....	....
Mandel Engraving Co., Engraving	....	1	21	1	22	2	....	....
Manegold Milling Co., Flour	1	2	20	....	20	....	3	300
Manistee, Luddington & Milw., Transportation	1	....	16	1	17	....	....	....
Manthey & Nelson, Machine Shops	1	....	3	....	3	2	....	....
Martin, Frank, Fur Dressing	2	....	13	2	15	....	1	80
Martin, Geo., Leather Co., Tannery	4	1	80	....	80	....	2	150
Mathews Bros., Furniture	4	2	127	3	130	....	2	150
Maxwell & Stillman, Plaster Works	2	....	30	....	30	....	....	....
Mayer, F., Boot & Shoe Co., Boots & Shoes	....	1	315	210	525	75	2	400
Mayer Cap Mfg. Co., Caps	....	1	9	3	12	1	....	....
Mayhew Mfg. Co., Furniture	4	4	260	....	260	43	3	200
McAlpine Engraving Co., Engraving	....	1	14	2	16	1	....	....
McGeogh Building Co., Manufacturing	....	1	6	....	6	....	2	140
Mechanical Appliance Co., Electric Motor Co.	1	....	30	8	38	4	1	80
Meckelberg, A. F., Sash & Doors	4	....	50	....	50	....	3	160
Meinecke & Son, Willow Ware, etc.	....	4	148	12	160	12	1	250
Meisenheimer Printing Co., Printing	1	....	17	....	17	....	....	....
Meissner-Bergwall Co., Extracts	....	1	7	2	9	....	....	....
Mellon, Wm., Brass Foundry	1	....	4	....	4	....	....	....
Metropolitan Mfg. Co., Clothing	....	1	9	86	95	14	....	....
Meyer, A. C., Co., Electrical Goods	....	1	14	1	15	1	....	....
Meyer Rotary Printing Co., Printing	1	....	38	7	45	5	....	....
Middleton Mfg. Co., Hats & Gloves	....	1	39	13	52	....	....	....
Miller Brewing Co., Brewery	17	3	330	20	350	14	6	1200
Miller, H. C. & Co., Stationery	....	1	73	50	123	9	....	....
Miller Mfg. Co., Wood Work	1	1	73	2	75	....	2	160
Millrath Printing Co., Printing	....	1	9	....	9	....	....	....
Milwaukee Automatic Machine Co., Machinery	1	1	80	....	80	....	2	120

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	Under 3 stories.	Three or more stories.	Male.	Female.	Total.	Under 16 yrs of age.	Number.	Total horse power.
MILWAUKEE—Continued.								
Milwaukee Bag Co., Bags	2	....	30	110	140	22	....	....
Milwaukee Barrel Co., Cooperage	2	1	70	11	81	....	2	80
Milwaukee Bedding Co., Bedding	....	1	22	8	30	1	....	....
Milwaukee Blank-Book Mfg. Co., Blank Books	....	1	145	....	145	30	....	....
Milwaukee Boiler Co., Boilers	1	....	75	....	75	....	1	75
Milwaukee Brass Mfg. Co., Brass Foundry	....	1	90	....	90	10	1	100
Milwaukee Brewery Co., Brewery	3	1	50	4	54	....	2	140
Milwaukee Bridge & Iron Wks., Bridge Wks.	5	....	80	....	80	5	1	150
Milwaukee Casket Co., Caskets	5	2	50	7	57	....	2	160
Milwaukee Cement Co., Cement Works	7	3	90	....	90	....	6	650
Milwaukee Chair Co., Chairs	9	1	300	....	300	19	3	350
Milwaukee Coffee Roasting Co., Coffee Roast.	1	....	3	....	3	....	....	....
Milwaukee Cold Storge Co., Storage	....	1	12	....	12	....	2	150
Milwaukee Corrugated Iron Co., Iron Foundry	2	....	100	2	102	....	2	120
Milwaukee Dry Dock Co., Vessel Repair	9	....	100	....	100	....	3	200
Milwaukee Dustless Brush Co., Brushes	....	1	48	1	49	6	....	....
Milwaukee Elevator Co., Elevators	3	2	14	....	14	....	4	490
Milwaukee Fire Department, Repair Shops	....	1	13	....	13	....	1	25
Milwaukee Gas Light Co., Gas Plant	....	1	250	....	250	....	9	900
Milwaukee Gas Light Co., Gas	9	....	95	....	95	....	4	800
Milwaukee Gas Light Co., Tar Refining	5	....	8	....	8	....	1	60
Milwaukee Hay Tool Co., Hay Tools	11	....	78	2	80	....	2	200
Milwaukee Journal, Printing	....	1	99	6	105	6	....	....
Milwaukee Lace Paper Co., Lace Paper	....	1	18	38	56	6	....	....
Milwaukee Legal News Pub. Co., Printing	1	....	6	....	6	1	....	....
Milwaukee Machinery Co., Machinery	1	....	8	....	8	....	....	....
Milwaukee Machine Tool Co. Tools	2	....	60	....	60	....	1	80
Milwaukee Malleable & Grey Iron Works, Foundry	2	....	175	....	175	13	1	80
Milwaukee Matting Co., Matting	2	2	15	....	15	....	....	....
Milwaukee Malt & Grain Co., Malt & Grain	....	5	35	3	38	....	....	....
Milwaukee Metal Working Co., Machinery	....	1	14	....	14	....	3	250
Milwaukee Net Co., Fly Nets	....	1	14	40	54	16	....	....
Milwaukee Novelty Dye Works, Dyeing	....	1	15	9	24	....	1	120
Milwaukee Ornamental Carving Co., Station'y	3	....	16	....	16	....	....	....
Milwaukee Ornamental Mfg. Co., Brass F'ndry	1	....	4	....	4	....	....	....
Milwaukee Papier Mache Works, Papier Mache	....	1	6	18	24	....	....	....
Milwaukee Parlor Frame Co., Frames	1	....	20	....	20	....	....	....
Milwaukee Pattern Works, Patterns	1	....	7	....	7	....	....	....
Milwaukee Printing Co., Printing	1	....	10	2	12	....	....	....
Milwaukee Skylight & Galv. Iron, Iron Works	1	....	6	....	6	....	....	....
Milwaukee Stamping Co., Hardware	1	....	6	....	6	....	1	60
Milwaukee Stove Foundry Co., Stoves	3	....	7	....	7	1	1	75
Milwaukee Stove Foundry Co., Foundry	7	1	50	....	50	....	1	50
Milwaukee Suspender Mfg. Co., Suspenders	....	1	1	6	7	....	....	....
Milwaukee Tack Co., Tacks	6	....	32	8	40	3	1	80
Milwaukee Tallow & Grease Co, Tallow, etc.	1	....	7	....	7	....	1	60
Milwaukee Valve Co., Brass Valves	2	....	9	2	11	1	....	....
Milwaukee Vinegar Co., Vinegar & Yeast	....	1	40	4	44	....	4	75
Milwaukee Wagon Iron Works, Wagon Hardware	4	....	35	1	36	1	1	100
Milwaukee-Western Fuel Co., Fuel	8	....	75	....	75	....	3	180
Milwaukee Woodwork Co., Woodwork	7	....	75	1	76	....	1	80
Milw. Worsted Cloth Co., Worsted Cloth	2	....	24	12	36	....	2	160
Milwaukee Worsted Mills, Worsted Cloth	7	....	85	85	170	40	4	450
Milwaukee Woven Wire Works, Woven Wire	3	....	35	....	35	4	1	80
Mitchell & Emerson Laundry, Laundry	....	1	5	24	29	2	....	....
Model Laundry Co., Laundry	2	....	11	63	74	2	1	100
Molltor, M., Pasteboard Boxes	....	1	11	42	53	6	1	40
Montgomery Annex Bldg., Manufacturers	....	1	10	2	12	....	....	....
Mooers, H., Machinery	1	....	53	1	54	....	....	....
Motor Car Power Equipment Co., Gas Engines	1	....	10	....	10	....	....	....
Mueller Furnace Co., Furnaces	....	1	30	....	30	....	....	....
Munich Statuary Co., Statuary	2	....	25	....	25	2	....	....

ESTABLISHMENTS INSPECTED.

Location, Name and Business.	Buildings.		Employes.				Boilers.	
	Under 3 stories.	Three or more stories.	Male.	Female.	Total.	Under 16 yrs. of age.	Number.	Total horse power.
MILWAUKEE—Continued.								
Minkwitz, E. H., Machine Shops	2	....	15	....	15	....	....	....
My Laundry Co., Laundry	2	....	7	15	22	2	1	20
Nash, J. N., Machinists	1	....	20	....	20	....	....	....
National Biscuit Co., Confectionery, etc.	....	1	250	150	400	50	2	150
National Blower Works, Machinists	5	....	32	1	33	....	1	80
National Box Co., Boxes	2	....	33	....	33	5	1	70
National Distilling Co., Yeast	5	2	36	....	36	....	6	800
National Distilling Co., Distillers	6	3	45	....	45	....	6	600
National Elastic Nut Co., Elastic Nuts	9	4	486	....	486	2	4	500
National Enameling & Stamping Co., Tinware	8	10	806	275	1081	203	4	1200
National Envelope Co., Envelopes	....	1	30	65	95	8	1	50
National Knitting Co., Knitting	....	1	50	350	400	142	3	375
National Sash & Door Co., Sash & Doors	1	....	20	....	20	3	....	....
Nelson, S., & Co., Fur Dressing	3	....	15	....	15	....	1	60
New Method Laundry, Laundry	1	....	4	22	26	3	1	45
New York Seltzer & Soda Mfg. Co., Soda Water	1	....	9	....	9	....	....	....
Niedecker, H., Co., Bindery	....	1	49	12	61	2	....	....
Niedermeyer, A., Printing	....	1	2	....	2	....	....	....
Nordberg Mfg. Co., Machinists	4	1	400	....	400	....	2	300
Norman-Duffke Foundry Co., Foundry	4	....	75	....	75	....	1	50
North Avenue Fuel Co., Wood & Coal	1	....	10	....	10	....	1	20
North, Jacob, Screens	1	....	2	....	2	....	....	....
Northern Novelty Works, Plating & Polishing	1	....	4	....	4	....	1	20
Northern Wire & Cable Co., Machinists	....	1	3	....	3	....	....	....
North Side Carriage Co., Carriages	2	....	6	....	6	....	....	....
Northwestern Fuel Co., Wood & Coal	1	....	20	....	20	....	2	200
Northwestern Furniture Co., Store Fur., etc.	2	1	77	....	77	1	1	150
Northwestern Lithograph'g Co., Lithographers	1	....	39	1	40	4	....	....
Northwestern Malleable Iron Co., Foundry	14	....	1082	18	1100	46	4	400
Northwestern Pattern Works, Patterns	1	....	4	....	4	1	....	....
Northwestern Pub. Co., Printing	....	1	9	1	10	1	....	....
Northwestern Steam Laundry, Laundry	1	....	3	12	15	....	1	25
Northwestern Straw Works, Straw Hats, etc.	1	3	200	100	300	25	4	400
Northwestern Tile Co., Tile	5	....	60	....	60	....	....	....
Obenberger, J. & G., Co., Forge Works	1	....	30	....	30	....	1	30
Ogden, G. W. & Co., Carriages	....	1	11	1	12	....	....	....
O'Neil Oil & Paint Co., Oils, Paints, etc.	....	1	30	2	32	....	2	120
Ossit Bros., Woodworkers	4	....	22	2	24	....	1	30
Pabst Brewing Co., Brewery	14	16	1297	205	1502	69	24	3000
Pabst Brewing Co., Shipping	2	....	65	....	65	....	....	....
Packages Pub. Co., Printing	....	1	5	1	6	....	....	....
Pahl, E. F. & Co., Baby Carriages	2	....	2	....	2	1	....	....
Painjard Machine & Pattern Co., Patterns	1	....	4	....	4	....	....	....
Painter, B., Ladies' Hats	....	1	2	25	27	1	....	....
Palace Laundry Co., Laundry	1	....	8	25	33	2	1	80
Patton Paint Co., Paint	1	2	125	50	175	....	3	300
Pauding & Harmschfegler, Machinists	5	2	625	....	625	....	5	800
Peez & Hoffman, Carriages & Sleighs	1	....	6	....	6	1	....	....
Peterson, Charles, Clothing	1	....	1	9	10	....	....	....
Peterson, Robert, Paper Ruling	....	1	3	2	5	2	....	....
Pfister & Vogel, Tannery	4	1	320	....	320	....	5	600
Pfister & Vogel, Tannery	4	10	834	99	933	34	12	400
Pflugradt Co., Candy	....	1	30	40	70	34	1	50
Phila. & Reading Coal & Iron Co., Coal Docks	11	....	30	....	30	....	4	320
Phoenix Knitting Co., Knitting	1	....	15	275	290	62	2	120
Phoenix Machine Co., Machines	1	....	4	....	4	....	....	....
Phoenix Printing Co., Printing	....	1	5	....	5	1	....	....
Phoenix Tannery, Tannery	5	7	400	1	401	8	5	700
Pietsch, Otto, Dye Works, Dye Works	....	2	37	62	99	10	2	120
Pietsch, Ferdinand, Patterns	1	....	9	....	9	....	....	....
Plankington Packing Co., Packing House	12	5	300	2	302	2	9	1000
Podlasky, J., Fur dressing	....	1	13	....	13	....	1	30
Polacheck, Chas. & Bro. Co., Elec. Chandeliers	....	2	39	4	43	1	....	....
Pollworth, Frederick & Bro., Printing	....	1	23	3	26	3	....	....

ESTABLISHMENTS INSPECTED.

Location, Name and Business.	Buildings.		Employes.				Boilers.	
	Under 3 stories.	Three or more stories.	Male.	Female.	Total.	Under 16 yrs. of age.	Number.	Total horse power.
MILWAUKEE—Continued.								
Pressed Steel Tank Co., Bed Springs	1	....	45	....	45	....	4	350
Pruss, R. J., Co., Bed Springs	....	1	35	....	35	....	....	....
Quinn, James Co., Bindery	1	....	6	....	6	....	....	....
Radtke Bros. & Kortsch Co., Printing	....	1	25	....	25	5	....	....
Rauschenberger, John Co., Cordage	6	....	36	....	36	15	1	75
Reckmeyer, Wm., & Co., Furs	....	1	11	14	25	....	....	....
Reckert & LaLoule, Leaf Tobacco	....	1	4	....	4	....	....	....
Reinart Mitten Co., Gloves	....	1	20	36	56	4	....	....
Reliable Boiler Works, Boilers	....	3	20	....	20	....	1	40
Reliance Electric Co., Motors	1	....	22	5	27	....	....	....
Reliance Gas & Oil Engine Co., Gas Engines	1	....	50	....	50	....	....	....
Rialto Elevator Co., Grain	1	1	25	....	25	....	2	460
Rice & Friedman Co., Shirts & Overalls	1	2	40	70	110	49	1	150
Richardson Printing & Paper Co., Printing	....	1	4	....	4	....	....	....
Rich Shoe Co., Shoes	....	1	125	75	200	11	1	80
Riemer Bros.' Shoe Co., Shoes	....	1	21	9	30	1	....	....
Rilling, J. E., & Co., Chairs	....	1	28	2	30	1	....	....
Ritter, Louis, Bar Fixtures, etc.	1	1	10	....	10	....	....	....
Riverside Printing Co., Printing & Engraving	....	1	70	....	70	5	2	200
Robinson Electro Plating, Electro Plating	1	....	5	....	5	....	....	....
Rock Washer Mfg. Co., Washers	3	....	10	10	20	4	3	310
Rockwell Mfg. Co., Interior Furnishing	11	1	375	3	378	37	6	750
Rohn, Geo. F., Electric Contractor	1	....	22	1	23	2	....	....
Romadka Bros., Trunks	1	5	272	27	299	41	2	130
Roth Vinegar & Pickle Co., Pickles	1	....	7	13	20	....	1	20
Rub., Jos. Co., Furniture	....	1	30	1	31	....	....	....
Ruesch, Jacob Co., Machinists	1	....	3	....	3	....	1	20
Rundle Mfg. Co., Enamel Iron Ware	8	....	115	....	115	1	2	160
Rundle-Spence Mfg. Co., Plumbers, etc.	....	1	119	11	130	....	1	80
Rutland Transit Co., Transportation	1	....	5	1	6	....	....	....
Salsbury Laundry, Laundry	1	....	10	26	36	....	1	25
Saxe, J. E., Painting	....	1	5	....	5	....	....	....
Seaboth Co., Scrap Iron	1	....	12	....	12	....	1	25
Schaaf, F., Sausage	1	....	17	1	18	....	1	25
Schaefer & Co., Monuments	3	....	10	....	10	....	....	....
Schamer, Jos., Granite & Marble Co.	3	....	40	....	40	....	1	60
Schielke, H. C., Carriages, etc.	1	....	7	....	7	....	....	....
Schiffer, Geo. & Co., Cooper Tools	1	....	2	....	2	....	....	....
Schilberg, G. W., Bicycles & Machines	1	....	1	....	1	....	....	....
Schmidt, Bros., Printing	1	....	7	....	7	....	....	....
Schmidt, Phillip, Cooperage	1	....	12	....	12	....	....	....
Schmidt, P., & Co., Cut Stone	4	....	35	....	35	....	2	100
Schmitt, F., & Sons Co., Galvanized Iron	1	....	12	....	12	....	....	....
Schoellkoph, Hartford & Hanna Co., Soda Wks	2	....	4	....	4	....	1	24
Schoeneker, V., Boot & Shoe Co., Shoes	1	1	100	50	150	....	2	100
Schoen & Walter Co., Traveling Bags	1	....	35	7	42	3	....	....
Schoen Mfg. Co., Cloaks & Skirts	1	....	30	60	90	....	1	36
Schroeder, John, Lumber Co., Lumber	5	....	187	3	190	2	3	500
Schulz, Geo. A., & Co., Paper Boxes	....	1	113	168	281	76	2	180
Schwab, A. J. & Sons Co., Iron & Steel	....	1	90	3	93	....	1	80
Schwab, Phillip, Machines	2	....	15	....	15	....	....	....
Schwalback, M., & Sons, Tower, Auto., etc.	1	....	3	....	3	....	....	....
Seaman, W. S., & Co., Furniture	....	1	30	....	30	....	1	80
Seebold, A. G., Scrap Iron, etc.	1	....	10	....	10	....	1	70
Seebote, D. W., Printing	....	1	3	....	3	....	....	....
Seeboth Bros. Co., Scrap Iron, etc.	....	1	50	20	70	....	1	30
Seidenberg & Hays, Cloaks	....	1	35	40	75	....	....	....
Sercomb, C. A., Mfg. Co., Soap	....	1	9	5	14	....	....	....
Sheriffs Mfg. Co., Machines	1	....	25	1	26	....	1	25
Siebers & Pederson, Patterns	1	....	6	....	6	....	....	....
Sight Feed Oil Pump Co., Oil Pumps	1	....	11	....	11	....	....	....
Signalphone Co., Electric Supplies	1	....	12	....	12	....	....	....
Skobis Bros., Steel Structural	2	....	35	....	35	....	1	80
Skubald, Sclauer Car'ge Co., Carriages, etc.	1	....	10	....	10	....	....	....
Slocum Straw Wks., Straw Felt Goods	....	1	55	74	129	....	....	....

ESTABLISHMENTS INSPECTED.

Location, Name and Business.	Buildings.		Employes.				Boilers.	
	Under 3 stories.	Three or more stories.	Male.	Female.	Total.	Under 16 yrs. of age.	Number.	Total horse power.
MILWAUKEE—Continued.								
Smith, C. S., Mfg. Co., Machinery	3	....	33	1	34	4	1	50
Smith, Geo. H., Steel Casting Co. Castings	1	....	100	....	100	....	1	60
Smith Machine Co., Concrete Machines	1	....	23	....	23	....	....	....
Smith-Midbury Mfg. Co., Machinery	1	....	10	1	11	....	1	40
Special Machine Co., Machinery	1	....	3	....	3	....	....	....
Standard Bedding Co., Bedding	....	1	30	6	36	2	....	....
Standard Brass & Machine Co., Brass Mach.	2	....	7	....	7	....	....	....
Standard Candy Co., Candy	....	1	12	23	35	14	....	....
Standard Glove Wks., Gloves	....	1	10	8	18	....	....	....
Standard Iron & Wire Wks., Iron & W. G'ds	1	....	8	....	8	....	....	....
Standard Knitting Co., Knitting	1	....	6	16	22	4	....	....
Standard Oil Co., Oil	1	....	25	....	25	....	1	80
Standard Victoria Laundry, Laundry	1	....	7	21	28	....	1	30
Starke, D. H., Dredge & Dock Co., Dredging	5	....	100	....	100	....	1	25
Star Tannery, Tannery	5	3	93	....	93	1	3	225
Stickbauer, Jos., Horseshoes	1	....	4	....	4	....	....	....
Stock, Chas. D., Jr., Coppersmith	1	....	2	....	2	....	....	....
Stolper, Chas., Cooperage Co., Cooperage	11	....	50	1	51	....	2	150
Sturder, William, Cases	....	1	10	....	10	....	....	....
Sueltoahn & Seefeld	3	....	22	....	22	....	1	100
Tabor Glove Co., Gloves	....	1	75	100	175	12	....	....
Tainsh & Co., Printers	....	1	5	....	5	1	....	....
Tewels & Grundman & Co., Upholsterers	....	1	27	1	28	1	....	....
The American Fine Art Co., Fine Arts	....	1	120	10	130	....	2	80
The Clinton-Burnham F'dry Co., Foundry	5	....	16	....	16	....	1	75
The Kutler-Hammer Mfg. Co., Elec. Devices	3	1	242	6	248	8	1	80
The Daily Reporter, Printing	1	....	7	....	7	....	....	....
The Edward Keogh Press, Printing	....	1	41	4	45	4	....	....
The Evening Wisconsin, Printing	....	1	119	16	135	6	1	25
The Falk Co., Machine Shops	15	....	331	2	333	....	4	700
The F. C. Gross Bros. Co., Packing House	6	....	40	....	40	....	2	125
The Filer & Stowell Co., Machinery	4	2	542	4	546	....	2	400
The Fuller & Warren Co., Stoves	7	1	548	2	550	4	3	250
The Greene Tel. & Elec. Mfg. Co., Telephones	....	1	10	....	10	....	....	....
The Gugler Lithographing Co., Lithographing	....	1	137	24	161	8	2	120
The Heil Rail Joint Welding Co., Steel Tanks	1	....	15	....	15	....	....	....
The Heinn Specialty Co., Albums	....	1	71	33	104	5	....	....
The Herold Co., Printing	....	1	79	11	90	1	....	....
The Kazall Mfg. Co., Bindery	....	1	12	18	30	....	....	....
The Layton Co., Packing House	7	1	60	....	60	....	2	140
The Merkel Mfg. Co., Motor Cycles	2	....	20	....	20	....	....	....
The Miller & Sons Co., Boxes	9	1	142	33	175	28	3	200
The Milwaukee Blank-bk. Mfg. Co., Bl'k Bks.	....	1	40	62	102	15	....	....
The Milwaukee Elec. Ry. & Lt. Co., Power	3	5	224	2	226	....	35	12,- 600
The Milwaukee Elec. Ry. & Lt. Co., Power	....	1	66	29	95	8	5	1900
The Milwaukee Gas Light Co., Repair Meters	....	1	90	....	90	....	....	....
The Milw. Incandescent Lt. Co., Mantles	....	1	2	2	4	....	....	....
The Milw. Lithographing Co., Lithographing	....	1	71	7	78	13	2	160
The Milwaukee Mueller Co., Boilers	1	....	75	....	75	....	1	60
The Milwaukee Sentinel, Printing	....	1	253	34	287	....	....	....
The M. & O. Company, Electric Apparatus	1	....	16	....	16	....	....	....
The Model & Specialty Co., Machinery	1	....	4	....	4	....	....	....
The Montgomery Bldg., Offices	....	2	7	2	9	....	3	240
The Morawetz Co., Furs	....	1	10	16	26	....	....	....
The Mueller & Sons Co., Boxes	3	1	124	30	154	33	3	150
Theobalt & Ehlert, Purses, etc.	....	1	3	8	11	1	....	....
The Phila. & Reading Coal & Iron Co., Coal	3	....	5	....	5	....	1	100
The Prinz & Rau Mfg. Co., Machinery	....	1	55	3	58	....	1	80
The R. J. Preuss Co., Spring Beds, etc.	2	1	30	....	30	2	....	....
The Schwab Stamp & Seal Co., Metal Wks.	....	1	29	1	30	4	....	....
The Sentinel Bindery, Book Bindery	....	1	17	28	45	5	....	....
The Singer Mfg. Co., Repairing	....	1	20	4	24	....	....	....
The Specialty Mfg. Co., Machinery	....	1	4	....	4	....	....	....
The Sun Mfg. Co., Ink & Carbon Paper	....	1	10	....	10	....	....	....

ESTABLISHMENTS INSPECTED.

Location, Name and Business.	Buildings.		Employes.				Boilers.	
	Under 3 stories.	Three or more stories.	Male.	Female.	Total.	Under 16 yrs of age.	Number.	Total horse power.
MILWAUKEE—Continued.								
The Towell Printing Co., Printing	....	1	14	....	14	1	....	....
The Twentieth Century Press, Printing	1	....	19	5	24	3	....	....
The Whitnall Coal Co., Coal	12	....	50	....	50	....	2	200
The Wollager Mfg. Co., Furniture	3	3	126	....	126	....	2	150
Thomas Furnace Co., Furnaces	5	....	160	1	161	....	5	500
Toepfer, W. & Sons, Iron Works	5	....	60	....	60	....	1	60
Trenkamp, F. & Co., Soap	2	....	8	....	8	1	1	30
Trinkner, H., Wagons & Carriages	1	....	5	....	5	....	....	....
Ulrich, Albert, Carpet Cleaning	1	....	4	....	4	....	....	....
Union Refrigerator Transit Co., Refrigerators	5	....	80	....	80	....	1	80
U. S. Envelope Co., Envelopes	....	1	20	75	95	25	2	150
U. S. Gypsum Co., Patent Plaster	....	1	22	....	22	....	2	150
United Web Suspender Co., Suspenders	....	1	3	1	4	2	....	....
Usinger, Fred, Sausage	1	1	20	6	26	....	1	60
Van Dyke Knitting Co., Knitting	....	1	15	150	165	25	2	80
Vaughn Atlantic Laundry Co., Laundry	....	1	4	23	27	1	1	50
Vaughn Machine Co., Machines, etc.	....	1	6	1	7	....	....	....
Vera Chemical Co., Chemicals	4	....	12	....	12	....	1	50
Vilter Mfg. Co., Machinists	5	....	400	....	400	....	4	300
Vizay, Bornstein Co., Cloaks & Suits	....	1	8	7	15	....	....	....
Voss, H., Bindery	....	1	40	73	113	19	....	....
Wadhams Oil & Grease Co., Oil & Grease	....	1	50	4	54	....	2	120
Wagner, A. F., Architectural Iron	1	....	16	....	16	....	1	80
Waldeck, Ed. F. & Co., Jewelry	....	1	4	....	4	1	....	....
Wallace, Smith & Co., Saddlery	....	2	115	61	176	9	....	....
Wallman Mfg. Co., Oil Tanks	1	....	17	4	21	5	....	....
Warnke & Co., Jeweler	....	1	7	....	7	1	....	....
Water Heater Mfg. Co., Water Heaters	....	1	5	....	5	....	1	10
Weaver-Austin Coal Co., Coal	7	....	30	....	30	....	2	250
Weingardt, A., Wool Cards	1	....	2	....	2	....	1	10
Weise, Paul, Upholstering	2	2	17	4	21	....	....	....
Weisel & Co., Sausage	5	2	30	....	30	....	1	80
Weiss & Schmidt, Pottery	2	1	10	....	10	....	1	35
Wellauer & Hoffmann	....	1	4	....	4	....	....	....
Werbach, L., Mineral Water, etc.	1	....	15	30	45	3	1	15
Western Grip & Trunk Co., Trunks, etc.	....	1	136	3	139	3	....	....
Western Hardware Mfg. Co., Iron Beds	3	1	140	15	155	3	2	65
Western Leather Co., Heel Leather	2	1	26	118	144	13	2	250
Western Malleable Iron Wks., Malleable Iron	4	....	125	3	128	4	1	80
Western Mfg. Co., Machine Tools	....	1	8	....	8	....	....	....
Western Overall Co., Overalls & Jackets	1	....	5	20	25	....	....	....
Western Rawhide Belting Co., Tanning, etc.	....	1	20	....	20	....	1	80
Western Soda Fountain Co., Soda Water	1	....	15	....	15	....	....	....
Westfahl, F. & Co., File Works	2	....	40	....	40	3	2	200
Westlake, Hunt, Smith & Co., Printing	....	1	14	....	14	2	....	....
Westphal, C. T. H., Barber Supplies	1	....	2	....	2	2	....	....
West Side Mfg. Co., Sash & Doors	5	....	48	....	48	1	1	100
Wetzel Bros. Printing Co., Printing	....	1	53	1	54	....	....	....
Weinbrenner Shoe Mfg. Co., Shoes	....	1	70	28	98	6	....	....
Weimer, E., Upholstering	....	1	48	2	50	....	....	....
Witnall & Rademaker Sup. Co., Bldg. Mat.	10	....	25	....	25	....	1	80
Wiens, A. R., Brush Co., Brushes	....	1	24	1	25	1	....	....
Wiesen Heel Co., Metal Heels	....	1	15	15	30	....	1	50
Wilbur Seed Meal Co., Seed Meal	....	1	12	29	41	2	....	....
Willer Mfg. Co., Door & Window Screens	3	1	76	2	78	2	2	150
Wilmans Bros. & Co., Lithographing	....	1	50	....	50	10	1	43
Winding & Gazelschap, Tar	2	....	15	....	15	....	....	....
Windsor Mfg. Co., Lead Pipe	1	....	7	....	7	....	1	20
Wisconsin Central Ry. Co., Transportation	1	....	38	....	38	....	....	....
Wisconsin Furniture Co., Furniture	4	1	85	....	85	7	2	150
Wisconsin Iron & Wire Wks., Ornam. Iron	1	....	70	1	71	....	1	125
Wisconsin Knitting Wks., Knitting	....	1	3	18	21	....	....	....
Wisconsin Mach. & Mfg. Co., Mach. Shops	3	....	8	....	8	....	1	60
Wisconsin Mal. Iron Wks., Malleable Iron	7	....	700	....	700	....	4	510
Wis. Overall Mfg. Co., Overalls, Shirts, etc.	....	1	2	12	14	1	....	....
Woods Steam Laundry, Laundry	....	1	6	25	31	....	1	40

ESTABLISHMENTS INSPECTED.

Location, Name and Business.	Buildings.		Employes.				Boilers.	
	Under 3 stories.	Three or more stories.	Male.	Female.	Total.	Under 16 yrs. of age.	Number.	Total horse power.
MILWAUKEE—Continued.								
Wrensch, B. F., Shoe Factory	....	1	40	....	40	12	1	40
Wright & Joys Co., Printing	....	1	34	6	40	1	....	....
Wright, E. & Co., Bed Springs	1	....	20	....	20	....	2	150
Wrought Washer Mfg. Co., Washer Works	8	....	95	15	110	5	3	300
Yewdale, J. H., & Sons Co., Printing	....	1	105	42	147	7	....	....
Young, Benj., Harness	....	1	85	4	89	1	....	....
Young, Churchman Co., Printing	....	1	7	3	10	1	....	....
Young Specialty Co., Savings Banks, etc	1	....	5	....	5	....	....	....
Zepp, Adam, Brooms	1	....	4	....	4	1	....	....
Ziegler, Geo. Co., Candy	....	1	45	161	206	98	3	240
Zimmerman Bros., Clothing	....	1	10	4	14	3	....	....
Zimmerman & Schilling, Printing	....	1	3	....	3	....	....	....
Zohrlaut, Herman, Leather Co., Tannery	6	4	239	1	240	1	4	700
Zwengel, Henry, Jeweler	....	1	8	....	8	....	....	....
Zwietusch, Otto Co., Soda Water Apparatus	2	....	39	....	39	....	1	60
Total	1257	527	45,433	8723	54,156	2991	747	80,030
MINERAL POINT, IOWA CO.—								
Graber & Theis, Feed	1	....	2	....	2	....	....	....
Ludden, F. C., Ice	1	....	2	....	2	....	1	45
Martin, J. C., Feed	1	....	3	....	3	....	....	....
Mineral Pt. Elec. Lt. Co., Elec. Lights	1	....	3	....	3	....	2	250
Mineral Point Zinc Co., Zinc & Acid	25	4	198	2	200	....	4	400
Mineral Spring Brewery, Brewery	8	....	5	....	5	....	1	80
Spensley & Hoare, Creamery	1	....	4	....	4	....	1	20
Total	38	4	217	2	219	....	9	795
MONROE, GREEN CO.—								
Aberg, Roy J., Laundry	1	....	2	3	5	....	1	16
Bordens Condensed Milk Co., Cond. Milk	5	....	17	7	24	....	2	250
Fitzgibbons Bros., Carriage Factory	2	2	29	....	29	....	....	....
Green Co. Herald, Printing	1	....	5	....	5	....	....	....
Lang, A. & Son, Carriages	7	....	15	....	15	....	2	120
Maurer, Chas., Gloves	1	....	40	40	80	....	1	30
Monroe Brewery, Brewery	7	4	14	....	14	....	2	250
Monroe Daily Journal, Printing	1	....	3	2	5	....	....	....
Monroe Evening Times, Printing	1	....	6	....	6	....	....	....
Monroe Gas Co., Gas Plant	1	....	4	....	4	....	....	....
Monroe Electric Lt. & Power Co., Lt. & Power	3	....	4	....	4	....	2	30
Monroe Planing Mill Co., Planing	5	....	14	....	14	....	1	50
Monroe Sentinel, Printing	1	....	6	....	6	....	....	....
Swamp Angel Job Printing, Printing	1	....	1	....	1	....	1	1
Total	37	6	160	52	212	....	12	747
NASH, BAYFIELD CO.—								
Ashland, Siskiwit & I. R. Ry. Co., Shops	3	....	60	....	60	....	1	30
NASHVILLE, FOREST CO.—								
Rogers Lumber Co., Lumber	2	....	50	....	50	....	2	100
NEENAH, WINNEBAGO CO.—								
Aylward, W. M. & Son, Foundry	4	....	9	....	9	....	....	....
Bergstrom Paper Co., Paper	10	....	67	23	90	4	5	800
Blair, T. B., Printing	1	....	1	1	2	....	....	....
Fox Riv. Val. Gas & Elec. Co., Gas & Elec.	5	....	3	....	3	....	1	80
Jameson, Robert, Machinery	1	....	2	....	2	....	....	....
Jersild Knitting Co., Sweaters	4	....	6	94	100	....	8	1200
Johnson Bros. Machine Co., Machinery	1	....	5	....	5	....	....	....
Kimberly & Clark Paper Co., Paper	13	5	215	26	241	....	5	650
Kruger & Lackman Milling Co., Flour	3	2	10	....	10	....	1	150

ESTABLISHMENTS INSPECTED.

Location, Name and Business.	Buildings.		Employes.				Boilers.	
	Under 3 stories.	Three or more stories.	Male.	Female.	Total.	Under 16 yrs of age.	Number.	Total horse-power.
NEENAH—Continued.								
Neenah Boot & Shoe Co., Boots & Shoes	....	1	35	15	50	1	....	....
Neenah Brass Co., Brass	1	....	3	....	3	....	....	....
Neenah Brewery, Brewery	4	....	1	....	1	....	1	8
Neenah Paper Co., Paper	11	1	63	13	76	....	3	700
Neenah Stove Works, Stoves	6	2	65	....	65	....	1	65
Neenah Times, Printing	1	....	7	1	8	....	....	....
News Publishing Co., Printing	2	....	5	4	9	....	....	....
Wickert, E. T., Sash & Doors	7	....	20	....	20	....	1	65
Total	74	11	517	177	694	5	26	3718
NEILLSVILLE, CLARK CO.—								
Cash, O. R., Steam Laundry, Laundry	1	....	1	2	3	....	1	16
Larson, Pump & Windmill Co., Windmills	1	....	1	....	1	....	1	18
Marsh, A. B., Co., Elevator	1	1	1	....	1	....	....	....
Neillsville Brewing Co., Brewery	3	1	4	....	4	....	1	35
Neillsville Cash Milling Co., Flour	3	1	4	....	4	....	1	50
Neillsville City Water Works, Water	2	....	1	....	1	....	2	100
Neillsville Electric Light Co., Lighting, etc.	1	....	1	....	1	....	....	....
Neillsville Novelty Co., Bee Hives	3	....	2	....	2	....	1	30
Neillsville Planing Mill, Lumber	1	....	2	....	2	....	1	20
Neillsville Times, Printing	1	....	2	....	2	....	....	....
Republican & Press, Printing	1	....	2	2	4	....	....	....
The German American, Printing	1	....	4	....	4	....	....	....
Wisconsin Furniture Mfg. Co., Furniture	6	1	75	5	80	7	2	160
Wolff & Korman, Wagons	3	....	4	....	4	....	1	18
Total	28	4	104	9	113	7	11	447
NEKOOSA, WOOD CO.—								
The Nekoosa Paper Co., Paper & Pulp	11	2	354	12	366	2	....	....
NEW LONDON, WAUPACA CO.—								
City Water Co., Water	3	....	1	....	1	....	1	80
Foote, A. D. & Co., Flour	....	1	7	....	7	....	1	75
Freiburger, Geo. & Sons, Wagons, etc.	1	....	7	....	7	....	1	10
Hatten Lumber Co., Lumber	3	....	148	2	150	....	5	225
Jensen, A., Milling Co., Flour	1	2	7	....	7	....	1	70
Knapstein, Theo., & Co., Brewery	11	4	9	....	9	....	1	36
Madson, H. P., Machinists	1	....	2	....	2	....	1	10
Model Steam Laundry, Laundry	1	....	1	4	5	....	1	15
New London Bottling Works, Mineral Water	2	....	3	....	3	....	1	15
New London Condensing Co., Condensed Milk	6	....	6	....	6	....	2	80
New London Elec. Lt. Co., Light & Power	1	....	2	....	2	....	2	160
New London Iron Works, Machinists	2	....	3	....	3	....	....	....
New London Press, Printing	1	....	2	2	4	....	....	....
New London Republican, Printing	1	....	3	3	6	....	....	....
Page & Lyon Mfg. Co., Bee Hives	8	....	35	....	35	....	1	75
Wisconsin Chair Co., Chairs	6	2	203	12	215	15	2	225
Total	48	9	439	23	462	15	20	1075
NEW RICHMOND, ST. CROIX CO.—								
Diesen, D. C., Cording	1	....	3	....	3	....	1	15
Duer, C. J., Machinists	1	....	2	....	2	....	....	....
Farmers' Grain Co., Elevator	2	....	3	....	3	....	....	....
Jagger's Novelty Works, Wood Working	1	....	4	....	4	....	....	....
New Richmond Elec. Light & Power Co., Light	1	....	2	....	2	....	2	120
New Richmond Roller Mills Co., Flour, etc.	5	....	34	1	35	....	3	130
Plumington's Monument Works, Monuments	1	....	2	....	2	....	....	....
Republican-Voice, Printing	1	....	4	....	4	....	....	....
Richmond Dairy & Cheese Co., Creamery	1	....	2	....	2	....	1	30

ESTABLISHMENTS INSPECTED.

Location, Name and Business.	Buildings.		Employes.				Boilers.	
	Under 3 stories.	Three or more stories.	Male.	Female.	Total.	Under 16 yrs. of age.	Number.	Total horse power.
NEW RICHMOND—Continued.								
Superior Creamery Co., Creamery	1	....	2	....	2	....	1	16
Tracer & Barrett, Wookworking	1	....	15	....	15	....	....	....
Willow River Lumber Co., Lumber	4	....	198	2	200	....	5	400
Total	20	....	271	3	274	....	13	711
NORTH CRANDON, FOREST CO.—								
Bailey, G., Lumber	1	....	20	....	20	....	2	100
NORTH MILWAUKEE, MILWAUKEE CO.—								
North Milwaukee Electric Light Co., Lighting	2	....	2	....	2	....	2	14
Poppert, Geo., Mfg. Co., Sash & Doors	4	....	90	....	90	2	3	260
Schneider Furniture Co., Furniture	3	....	40	....	40	2	1	100
Smith & Barns Mfg. Co., Pianos	1	....	3	....	3	....	....	....
Wagner, E. R., Mfg. Co., Hardware, etc	3	....	75	5	80	....	1	75
Wisconsin Bridge & Iron Co., Bridge Iron	3	1	325	2	327	6	2	200
Total	16	1	535	7	542	10	9	649
OCONTO, OCONTO CO.—								
Alert & McGuire Pickle Co., Pickles	1	....	3	....	3	....	....	....
Citizens Electric Light Co., Lighting	1	....	5	....	5	....	2	200
Gilke-Penalton Co., Lumber	1	....	30	....	30	....	4	200
Holt Lumber Co., Lumber	16	....	405	....	405	16	9	700
Oconto Brewing Co., Brewery	1	....	10	....	10	....	1	75
Oconto Canning Co., Canning	3	....	5	15	20	....	2	80
Oconto Co., Lumber	10	....	140	....	140	....	8	600
Oconto County Reporter, Printing	1	....	3	4	7	1	....	....
Oconto Milling Co., Flour & Feed	....	1	2	....	2	....	1	80
Peoples Land & Manufg. Co., Electric Plant.	1	....	4	....	4	....	2	180
The Enterprise, Printing	1	....	3	2	5	....	....	....
Water Co., Water	1	....	2	....	2	....	3	180
Total	37	1	612	21	633	17	32	2295
OCONTO FALLS, OCONTO CO.—								
Cota, Geo., Elevator	1	....	2	....	2	....	....	....
Falls Mfg. Co, Paper, Pulp, etc.	20	....	192	8	200	10	9	1440
The Herald, Printing	1	....	3	1	4	....	....	....
Union Mfg. Co., Pulp	4	....	45	....	45	4	1	100
Total	26	....	242	9	251	14	10	1540
ODANAH, ASHLAND CO.—								
Stearns, J., Lumber Co., Lumber	9	....	300	....	300	7	6	700
OREGON, DANE CO.—								
Barnard & Wilder, Tobacco Warehouse	1	....	27	13	40	....	....	....
Cramer, Jas., Machine Shop	1	....	3	....	3	....	....	....
Oregon Observer, Printing	1	....	1	2	3	....	....	....
West & Spink, Feed	1	....	2	....	2	....	....	....
Total	4	....	33	15	48	....	....	....
OSHKOSH, WINNEBAGO CO.—								
American Grass Twine Co., Grass Twine	13	....	100	115	215	....	3	225
Arnold Vinegar & Yeast Co., Vinegar, etc.	3	....	1	....	1	....	1	35
Badger Plating Works, Plating	1	....	2	....	2	....	....	....
Baldauf, Louis, Repair Shop	1	....	1	....	1	....	....	....
Ballard, A. W., Sons, Co., Bicycles	1	....	2	....	2	....	....	....
Banderobe-Chase Co., Furniture	9	2	177	1	178	23	2	400
Battis Bros., Boilers	4	....	12	....	12	1	....	....
Brand, Robert & Sons, Bank Fixtures	1	2	24	....	24	....	....	....

ESTABLISHMENTS INSPECTED.

Location, Name and Business.	Buildings.		Employes.				Boilers.	
	Under 3 stories.	Three or more stories.	Male.	Female.	Total.	Under 16 yrs of age.	Number.	Total horse power.
OSHKOSH—Continued.								
Buckstaff-Edwards Co., Chairs, etc.	5	4	244	66	310	12	4	400
Campbell & Cameron Co., Box Fact'y & Lumber	10	....	95	....	95	4	3	300
Castle-Pierce Printing Co., Printing	1	....	12	3	15	....	....	....
Challoner, Geo., & Co., Machinery	9	....	45	....	45	....	1	75
Clark, J. L., Carriages	10	....	119	6	125	2	....	....
Cook & Brown Lime Co., Lime	5	....	20	....	20	....	....	....
Crystal Laundry, Laundry	1	....	1	5	6	....	1	20
Davis-Hanson Co., Pumps	12	....	31	1	32	....	1	40
Diamond Match Co., Matches	16	....	175	122	297	41	4	320
Diamond Sticky Fly Paper Co., Fly Paper	2	....	10	10	20	....	1	60
Doman, H. C., Gas Engines	3	....	38	....	38	....	....	....
Duggan Printing Co., Printing	1	....	5	....	5	....	....	....
Dunham & Co., Glue	1	....	10	....	10	....	....	....
Edwards-Ihrig Co., Mattresses	....	1	9	4	13	1	....	....
Forewarned Sleeve Protector Co., Sleeve Protectors	1	....	1	3	4	....	....	....
Foster-Lothman Mills, Sash & Doors	9	1	171	....	171	13	3	400
Gillen's Laundry & Dye Works, Laundry, etc.	4	....	5	24	29	2	2	80
Gillingham & Son, Wagons	1	....	5	....	5	....	....	....
Globe Printing Co., Printing	1	....	11	3	14	1	....	....
Gould Mfg. Co., Sash & Doors	7	2	146	5	151	5	2	200
Gunz Bros., Wagons	1	....	5	....	5	....	....	....
Hayes, E. B., Machine Co., Machinery	8	....	41	....	41	....	1	40
Hicks Printing Co., Printing	1	....	29	1	30	1	....	....
Hollister, Amos & Co., Lumber	7	....	149	1	150	....	3	450
Horn & Allen Co., Flour	1	1	4	....	4	....	1	100
Jones & La Borde, Boats, etc.	1	....	10	....	10	....	....	....
Kaufmann, Chas., Repairs	1	....	3	....	3	....	....	....
Kusche, Edward, Lime	2	....	3	....	3	....	....	....
Laus, Jos., Candy	1	....	5	4	9	....	....	....
Mathwig, John, Wagons	1	....	3	....	3	....	....	....
McMillan, R., & Co., Sash & Doors	16	....	188	2	190	8	3	340
Morgan Co., The, Sash & Doors	8	2	418	10	428	13	3	765
Neville, Thos., Carriages	....	1	20	....	20	....	....	....
Novelty Key Tack Co., Novelties	1	....	2	....	2	....	....	....
Oshkosh Bedding Co., Mattresses	....	1	6	3	9	....	....	....
Oshkosh Brewing Co., Brewing & Bottling	16	2	24	....	24	1	4	200
Oshkosh Brush Co., Brushes	1	....	7	9	16	5	....	....
Oshkosh Box Factory, Cigar Boxes	2	....	8	8	16	....	1	25
Oshkosh Clothing Mfg. Co., Clothing	....	1	8	60	68	....	....	....
Oshkosh Electric Light & Power Co, Light	1	....	18	....	18	....	3	970
Oshkosh Furniture Co., Furniture	5	2	101	1	102	4	2	250
Oshkosh Gas Light Co., Gas	5	....	20	....	20	....	2	185
Oshkosh Grass Matting Co., Matting	3	....	15	20	35	....	....	....
Oshkosh Logging Tool Co., Tools	3	....	57	3	60	....	....	....
Oshkosh Machine Co., Machinery	....	1	3	....	3	....	....	....
Oshkosh Muslin Underwear Co., Underwear	1	....	3	47	50	....	....	....
Oshkosh Paint Co., Paints	2	....	4	....	4	....	....	....
Oshkosh Shirt Co., Shirts	1	....	1	3	4	....	....	....
Oshkosh Soap Co., Soaps	2	....	4	....	4	....	1	20
Oshkosh Trunk Co., Trunks	3	2	55	5	60	....	2	240
Oshkosh Water Works, Water	4	....	5	....	5	....	4	400
Paine Lumber Co., Lumber, Sash & Doors	32	1	940	20	960	48	13	1630
Radford Bros. & Co., Lumber, Sash & Doors	10	....	207	1	208	15	4	300
Rahr Brewing Co., Brewery	4	1	5	....	5	....	....	....
Ransom Mfg. Co. Machinery	1	....	6	....	6	....	....	....
Reliance Boiler Works, Boilers	1	....	10	....	10	....	....	....
Reliance Flouring Mills, Flour	1	1	7	....	7	....	1	100
Schmidt, H. P., Co., Flour	1	1	8	....	8	....	1	150
Schmit Bros. Trunk Co., Trunks	2	2	114	60	174	15	1	100
Schneider, Louis, Bottle Covers	3	....	11	29	40	....	1	16
Schram, A. W. & Son, Rockers	5	1	55	5	60	....	....	....
Schulz, Aug., & Co., Cooperage	1	....	2	....	2	....	1	10
Star Foundry & Machine Works, Foundry	5	....	22	....	22	....	1	25
Starkweather, The R. R. Co., Woodworking	7	....	43	1	44	....	1	75

ESTABLISHMENTS INSPECTED.

Location, Name and Business.	Buildings.		Employes				Boilers.	
	Under 3 stories.	Three or more stories.	Male.	Female.	Total.	Under 16 yrs. of age.	Number.	Total horse power.
OSHKOSH—Continued.								
Streich, A., & Bros., Wagons	3	....	56	2	58	1	1	100
Streich, Gabriel, Wagons	5	1	24	1	25	....	1	75
Termaat & Monahan, Gas Engines	1	....	5	....	5	....	....	....
Times Publishing Co., Printing	1	....	29	1	30	....	....	....
Theilen, John, Distilling Co., Distillery	3	1	3	....	3	....	1	60
Thiemann, A. R., Plating	1	....	1	1	2	....	....	....
Troy Steam Laundry, Laundry	1	....	3	17	20	....	1	30
U. S. Engine Works, Engines	1	....	3	....	3	....	....	....
Walker & Challoner, Machinery	1	....	3	....	3	....	....	....
Warwick & Cole Co., Elevators	....	1	4	....	4	....	....	....
Wenrich, H. F., Monuments	3	....	15	....	15	....	....	....
Williamson & Libby Lbr. Co., Sash & Doors	9	....	200	....	200	5	3	375
Wilson Bros., Wagons	1	....	4	....	4	....	....	....
Winnebago Traction Co., St. Railway	2	....	58	2	60	....	3	800
Wisconsin Art Glass Co., Glass	1	....	12	....	12	....	....	....
Wisconsin Pulp Plaster Co., Pulp Plaster	2	....	7	9	16	5	1	100
Wisconsin Telegraph, Printing	1	....	8	4	12	....	....	....
Ziebell, R. C., Patterns	1	....	2	....	2	....	....	....
Total	340	35	4558	698	5256	221	93	10,-
PARK FALLS, PRICE CO.—								
Flambeau Paper Co., Paper Mill	3	....	79	6	85	3	6	500
Rieben, Christian, Lumber	1	....	8	....	8	1	1	12
Winnebago Realty Co., Shingles	1	....	35	....	35	....	....	....
Total	5	....	122	6	128	4	7	512
PESHTIGO, MARINETTE CO.—								
Parley-Lowe & Co., Lumber & Planing	2	....	170	....	170	....	5	500
Peshtigo Flour Mill Co., Flour	....	1	3	....	3	....	....	....
Peshtigo Times, Printing	1	....	3	1	4	....	....	....
The Peshtigo Lumber Co., Lumber	2	....	18	....	18	....	5	500
The Peshtigo Milling Co., Flour	....	1	2	....	2	....	....	....
Wisconsin & Michigan Ry. Co., Shops	4	....	48	....	48	....	1	10
Total	14	2	244	1	245	....	11	1010
PHILLIPS, PRICE CO.—								
Davis, J. R., Lumber Co., Lumber	13	....	400	....	400	5	9	1130
Miller, Geo. P., Lumber Co., Lumber	3	....	40	....	40	1	1	125
Total	16	....	440	....	440	6	10	1255
PLATTEVILLE, GRANT CO.—								
Boll, W. J., Machine Shop	1	....	1	....	1	....	....	....
Capititola Mining Co., Mining	3	....	19	....	19	....	....	....
Crystal Steam Laundry, Laundry	1	....	3	3	6	....	1	10
Empire Mining Co., Mining	2	1	18	....	18	....	1	60
Grindell Brick Co., Brick	5	....	13	....	13	....	....	....
Hibernia Mining Co., Mining	2	....	10	....	10	....	1	40
Hoppe Brewing Co., Brewery	2	3	7	....	7	....	1	1
Lucky-four Mining Co., Mining	1	1	10	....	10	....	1	60
Plapp, J. D., Butter Tubs	2	....	1	....	1	....	1	20
Platteville Cheese & Produce Co., Creamery	3	....	2	....	2	....	1	20
Platteville Elec. Light & Power Co., Light	3	....	3	....	3	....	3	320
Platteville Foundry & Mach. Co., Mach. Shop	3	....	26	....	26	....	1	80
Platteville Lead & Zinc Co., Mining	8	....	30	....	30	....	1	60
Platteville Water Works, Water	2	....	2	....	2	....	2	200
Schroeder Feed Mill, Feed	2	....	3	....	3	....	....	....
St. Rose Mining Co., Mining	4	....	16	....	16	....	....	....
Total	44	5	164	3	167	....	14	871

ESTABLISHMENTS INSPECTED.

Location, Name and Business.	Buildings.		Employes.				Boilers.	
	Under 3 stories.	Three or more stories.	Male.	Female.	Total.	Under 16 yrs. of age.	Number.	Total horse power.
PLYMOUTH, SHEBOYGAN Co.—								
Thurman, F., & Co., Machine Shops	2	....	10	....	10	....	....	....
Pfifer & Co., Flour	1	....	4	....	4	....	....	....
Plymouth Brewing Co., Brewery	2	....	10	....	10	....	....	....
Plymouth Furniture Co., Furniture	1	2	30	9	39	4	....	....
Schwartz Mfg. Co., Tables	2	....	20	....	20	....	....	....
Total	8	2	74	9	83	4	....	....
PORTAGE, COLUMBIA CO.—								
Buckley & Leisch, Tailors	1	....	13	3	16	....	....	....
C. & H. Steam Laundry, Laundry	1	....	3	7	10	....	1	25
C., M. & St. P. Ry. Co., Shops	2	....	9	....	9	....	2	40
Crystal Bottling Works, Soda Water	1	....	4	....	4	....	....	....
Epstein Bros., Brewery	8	....	6	....	6	....	1	20
Eulberg Bros., Brewery	3	....	10	....	10	....	1	60
Portage Bottling Co., Root Beer, etc.	1	....	3	....	3	....	....	....
Portage City Elec. Lt. & Power Co., Lighting	1	....	3	....	3	....	2	150
Portage City Water Co., Water	1	....	2	....	2	....	2	150
Portage Hosiery Co., Knitting	3	2	49	120	169	25	1	85
Portage Steam Laundry, Laundry	1	....	3	4	7	....	1	20
Portage Underwear Co., Knitting	1	....	1	15	16	....	1	12
The Democrat, Printing	1	....	5	4	9	....	....	....
The Register, Printing	1	....	4	5	9	....	....	....
Wisconsin Rundschau, Printing	1	....	3	....	3	1	....	....
York, I. W., & Co., Flour & Feed	1	1	8	....	8	....	....	....
Total	28	3	126	158	284	26	12	562
PORT EDWARDS, WOOD CO.—								
John Edwards Mfg. Co., Paper & Pulp	5	....	136	4	140	2	6	720
PORT WASHINGTON, OZAUKEE CO.—								
Barth Bros. Mfg. Co., Tables	8	....	33	....	33	....	1	100
Gilson Mfg. Co., Chairs	11	....	110	....	110	....	2	125
Gunther Bros. Brick Co., Brick & Tile	8	....	15	1	16	....	2	80
Martin & Wester, Plows	1	....	3	....	3	....	1	10
Ozaukee County Advertiser, Printing	1	....	2	....	2	....	....	....
Port Washington Brewery, Brewery	6	....	10	....	10	....	2	116
Port Washington Pilot, Printing	1	....	2	....	2	....	....	....
Port Washington Star, Printing	1	....	1	2	3	....	....	....
Port Washington Zeitung, Printing	1	....	1	2	3	2	....	....
Schumacher, Frank, Elevator	1	1	2	....	2	....	....	....
Schunk Brick Co., Brick	3	....	15	....	15	....	1	50
The Port Washington Herald, Printing	1	....	2	....	2	....	....	....
U. S. Laundry, Laundry	1	....	1	2	3	....	1	8
Wisconsin Brass Co., Brass	3	....	42	8	50	6	1	100
Wisconsin Chair Co., Chairs	5	7	560	40	600	33	6	800
Total	52	8	799	55	854	41	17	1389
PRAIRIE DU CHIEN, CRAWFORD CO.—								
Benthin, Chas., Repair Shop	1	....	1	....	1	....	....	....
Cherrier, C. P., Buttons & Shoe Polish	1	....	3	....	3	....	....	....
Fort Crawford Bottling Works, Soda Water	1	....	3	....	3	....	....	....
Fox & Favre, Pearl Buttons	1	....	7	....	7	....	....	....
Hunting Elevator Co., Elevator	1	1	8	....	8	....	1	100
Kalina & Son, Pearl Buttons	1	....	5	....	5	....	....	....
Knops Bros., Pearl Buttons	1	....	2	....	2	....	....	....
Lechner's Pearl Button Co., Pearl Buttons	1	....	6	....	6	....	....	....
Martner, E. T., Pearl Buttons	1	....	17	....	17	....	....	....
Prairie City Electric Co., Lighting	1	....	5	....	5	....	2	260
Prairie City Record, Printing	1	....	3	....	3	....	....	....
Prairie du Chien Button Co., Pearl Buttons	1	1	75	....	75	....	1	50
Prairie du Chien Steam Laundry, Laundry	1	....	2	1	3	....	1	5

ESTABLISHMENTS INSPECTED.

Location, Name and Business.	Buildings.		Employes.				Boilers.	
	Under 3 stories.	Three or more stories.	Male.	Female.	Total.	Under 16 yrs. of age.	Number.	Total horse power.
PRAIRIE DU CHIEN—Continued.								
Prairie du Chien Union, Printing	1	....	2	2	4	....	....	....
Prairie du Chien Woolen Mill Co., Woolen Cl.	3	....	16	42	58	....	1	80
Rienow & Morris, Egg Cases	3	....	6	....	6	....	1	40
Schumann & Menges, Brewery	8	....	7	....	7	....	1	35
The Curier, Printing	1	....	3	....	3	....	....	....
Winger, F. L., Flour & Feed	2	....	2	....	2	....	1	40
Total	31	2	173	45	218	....	9	610
PRATT JCT., ONEIDA CO.—								
Sukey, James, Lumber	1	....	10	....	10	....	1	50
RACINE, RACINE CO.—								
Adams, E. B., & Son, Bolsters	1	....	10	....	10	....	....	....
American School Furniture Co., School Furn.	1	5	176	1	177	....	1	400
Badger Mfg. Co., Skirts & Shirts	1	....	15	110	125	11	1	40
Barker Feeder Co., Feed Cutters	....	1	6	....	6	....	....	....
Bell City Basket Co., Baskets	1	....	24	....	24	2	....	....
Bell City Mfg. Co., Feed Cutters	2	1	100	....	100	....	1	125
Bell City Sash & Door Co., Sash, Doors, etc.	1	....	14	....	14	....	1	100
Bell City Steam Dye Works, Dye Works	1	....	2	1	3	....	....	....
Brown, W. P., Mfg. Co., Saddlery	3	....	18	....	18	....	1	25
Camp Furniture Co., Furniture	1	....	25	12	37	....	1	75
Carroll, J. C., Coal & Wood	1	....	22	....	22	....	2	75
Case, J. I., Threshing Machine Co., Treshing Machines	11	5	1400	....	1400	44	3	275
Case Plow Works, Plows	3	4	600	....	600	....	4	750
Chalmers & Co., Foundry	1	....	11	....	11	....	....	....
Chicago Rubber Clothing Co., Rubber Cloah'g	2	2	20	100	120	....	2	200
Clancey, J. F., & Co., Coal & Wood	1	....	15	....	15	....	2	110
Collier, T. & P., Ironing Machines	1	....	5	....	5	....	....	....
Driver, Thos. & Sons Mfg. Co., Sash & Doors.	1	....	42	....	42	....	1	100
Eisendrath, B. D., Tannery	1	2	100	5	105	....	2	100
Fiebuch, Fox & Hilker, Shoes	2	1	55	45	100	6	1	40
Fish Bros. Wagon Co., Wagons	....	1	245	....	245	4	3	550
Fisher & Schweitzer, Laundry	1	....	1	7	8	....	....	....
Freeman, Geo. B. & Co., Bits	1	....	6	....	6	....	....	....
Freeman, S. & Sons' Mfg. Co., Boilers	9	4	218	3	221	....	2	205
Goehner, Chas., Wire Fence	1	....	5	....	5	....	....	....
Graham, F. W. Mfg. Co., Patterns	1	....	2	....	2	....	1	40
Gunther, F. W., Co., Sauerkraut	6	....	28	12	40	....	2	130
Hartman Trunk Co., Trunks	....	2	165	40	205	33	....	....
Harvey Spring Co., Springs	1	....	16	....	16	....	....	....
Hilker-Wiechers Mfg. Co., Garments	1	....	6	119	125	7	....	....
Hodges, G. & Sons, Machine Shop	1	....	7	....	7	....	....	....
Holbrook-Armstrong Iron Co., Foundry	4	....	85	....	85	....	4	300
Imperial Bit & Snap Co., Bits & Snaps	....	1	20	....	20	....	3	275
Johnson & Son, Floor Wax	2	....	43	....	43	4	....	....
Journal Printing Co., Printing	1	....	17	5	22	....	....	....
Kane, Thos., Co., School Furniture	2	2	40	5	45	....	1	100
Lakeside Malleable Iron Co., Malleable Iron	2	....	165	....	165	4	2	200
Lang Mfg. Co., Hardware	1	....	25	....	25	....	....	....
Manufacturers Ptg. Co., Printing	1	....	12	3	15	1	....	....
Mitchell, Lewis & Co., Wagons	1	8	434	....	434	14	4	500
Model Steam Laundry, Laundry	2	....	6	16	22	....	1	20
Modern Skirt Co., Skirts	1	....	11	40	51	....	....	....
Philbrook Shoe Co., Tanners, Pacs	1	1	14	1	15	1	2	150
Pierce Engine Co., Gasoline Engines	3	....	50	....	50	....	....	....
Piggins Bros., Machinery	1	....	3	....	3	....	1	15
Princess Waist Co., Waists	1	....	....	75	75	....	....	....
Pugh, W. H., Coal & Wood	1	....	18	....	18	....	1	125
Racine Brass & Iron Co., Brass	2	....	12	....	12	....	....	....
Racine Daily Times, Printing	....	1	17	3	20	2	....	....
Racine Furniture Mfg. Co., Desks	....	1	14	....	14	....	1	40

ESTABLISHMENTS INSPECTED.

Location, Name and Business.	Buildings.		Employes.				Boilers.	
	Under 3 stories.	Three or more stories.	Male.	Female.	Total.	Under 16 yrs. of age	Number.	Total horse power.
RACINE—Continued.								
Racine Gas Light Co., Light	1	....	12	....	12	....	2	60
Racine Hardware Co., Engines	1	....	60	....	60	....	....	....
Racine Hatcher Co., Incubators	1	....	10	....	10	....	....	....
Racine Machine & Tool Co., Candy Machines.	1	....	30	....	30	....	....	....
Racine Malleable Iron Co., Malleable Iron	6	....	313	12	325	19	2	250
Racine Mangle Co., Mangles	1	....	60	....	60	....	....	....
Racine Metal Stamp. Co., Sheet Metal Stamp'g	1	....	6	....	6	....	....	....
Racine Novelty Co., Ironing Boards	....	1	18	....	18	....	1	40
Racine Paper Box Mfg. Co., Paper Boxes	1	....	2	13	15	2	....	....
Racine Paper Goods Co., Paper Goods	1	....	17	22	39	5	....	....
Racine Pole & Spring Co., Bolster Springs	1	....	6	1	7	....	....	....
Racine Refrigerator Co., Refrigerators	2	....	50	1	51	....	2	150
Racine Shoe Mfg. Co., Shoes	3	2	45	30	75	3	1	60
Racine Skirt Co., Skirts	....	1	2	15	17	....	....	....
Racine Steel & Iron Co., Wagon Skeins	5	....	125	....	125	....	2	275
Racine Top, Dash & Cush. Co., B'gy Tops, etc.	1	....	6	2	8	....	....	....
Racine Traveling Bag Co., Traveling Bags	....	1	5	4	9	....	....	....
Racine Trunk Co., Trunks	2	4	42	3	45	4	1	80
Racine Wagon & Carriage Co., Wagons	18	8	725	25	750	6	4	800
Racine Water Co., Water	4	....	4	....	4	....	4	500
Racine Woolen Mills, Shawls	....	1	50	100	150	11	2	375
Roberts & Case, Flour	3	....	8	....	8	....	1	60
Roberts & Co., Stone Works	2	....	9	....	9	....	....	....
Schoen Mfg. Co., Cloaks	1	....	12	50	62	5	1	50
Secor, M. M., Trunks	....	3	118	7	125	6	2	160
Shoop, Dr., Family Med. Co., Medicine	1	1	30	60	90	2	2	150
Stecher-Weber Mfg. Co., Sash & Doors	....	1	40	....	40	....	1	100
Tecktonius, E. C., Tanks, Lugs & Springs	1	....	10	....	10	....	....	....
The Chas. Alshuler Mfg. Co., Overalls	1	....	10	175	185	5	1	60
The Commercial Press Co., Printing	1	....	13	4	17	....	....	....
The Metal Stamping Co., Dies	1	....	8	....	8	....	....	....
The Miller, J., Shoe Co., Shoes	2	....	225	75	300	10	2	150
The Milw. Elec. Ry. Co., Power & Light	5	....	15	....	15	....	6	1500
The Racine News, Printing	1	....	12	2	14	....	....	....
Waber Mfg. Co., Potato Planters	1	....	5	....	5	....	....	....
West Side Laundry Co., Laundry	1	....	6	23	29	....	1	20
Windship Mfg. Co., Pumps	1	....	20	....	20	....	1	60
Wisconsin Wheel Works, Bicycles	3	....	127	5	132	8	2	130
Total	159	63	6601	1232	7833	219	95	10.–095
RED CLIFF, BAYFIELD CO.—								
Red Cliff Lumber Co., Lumber	2	....	125	....	125	....	3	300
REEDSBURG, SAUK CO.—								
Appleton Woolen Mills, Woolen Cloth	5	1	22	20	42	....	2	150
Church, W. L., Furniture	2	....	20	....	20	....	1	20
Peas Planing Mill Co., Planing & Feed	3	....	8	....	8	....	1	30
Reedsburg Brewery, Brewery	3	1	5	....	5	....	1	35
Reedsburg Canning Co., Canning	4	....	65	45	110	....	....	....
Reedsburg Clothing Co., Clothing	1	....	9	20	29	1	....	....
Reedsburg Creamery, Creamery	1	....	3	....	3	....	1	20
Reedsburg Elec. Lt. & Water Co., Lt. & Water	2	....	3	....	3	....	2	300
Reedsburg Flouring Mill, Flour	2	1	3	....	3	....	1	75
Reedsburg Marble Works, Monuments	2	....	12	....	12	....	....	....
Sanders, A. M., Wagons	2	....	2	....	2	....	....	....
Strampe, A. E. & Bros., Laundry	1	....	2	3	5	1	1	12
Theodore-Discot Co., Wagons	1	....	2	....	2	....	....	....
The Reedsburg Times, Printing	....	1	3	....	3	....	....	....
Vonwald & Son, Machine Shop	1	....	3	....	3	....	....	....
West Side Bldg. Co., Sash & Doors	4	....	10	....	10	....	....	....
Total	35	4	177	88	265	2	10	642

Location, Name and Business.	Buildings.		Employes.				Boilers.	
	Under 3 stories.	Three or more stories.	Male.	Female.	Total.	Under 16 yrs. of age.	Number.	Total horse power.
RHINELANDER, ONEIDA CO.—								
Brown Bros. Lumber Co., Lumber	5	....	150	....	150	2	7	400
Builders' Hardware Co., Hardware	1	....	7	....	7	....	....	....
Christianson, M., Bicycles	1	....	4	....	4	....	1	14
Couro, A. & Son, Lumber	3	....	15	....	15	....	2	100
Heckworthy Construction Co., Builders	6	....	250	....	250	12	7	166
Herald, Printing	1	....	2	1	3	....	....	....
Johnson-Hinman Lumber Co., Lumber	4	....	150	....	150	....	4	350
M., St. P. & Sault Ste M. Ry., Power House	2	....	12	....	12	....	....	....
Model Steam Laundry, Laundry	1	....	3	4	7	....	1	10
New North, Printing	1	....	4	2	6	....	....	....
Oneal, J. H., Planing	3	....	40	....	40	....	1	150
Rhinelander Brewing Co., Brewery	2	....	5	....	5	....	1	25
Rhinelander Iron Co., Iron	3	....	15	....	15	....	1	40
Rhinelander Lighting Co., Light	1	....	6	....	6	....	3	400
Rhinelander Mfg. Co., Refrigerators	6	....	75	....	75	14	2	150
Rhinelander Paper Co., Paper	5	1	150	....	150	2	....	....
Robins Lumber Co., Lumber	5	....	249	1	250	....	5	300
Stevens Lumber Co., Lumber	2	....	150	....	150	....	5	350
Vindicator, Printing	1	....	1	2	3	....	....	....
Water Works, Water	1	....	6	....	6	....	2	200
Total	54	1	1294	10	1304	30	42	2655
RICE LAKE, BARRON CO.—								
Barron County Handle Factory, Handles	1	....	6	....	6	....	....	....
Boortz, F. S. & Co., Repair Shop	1	....	3	....	3	....	....	....
Chronotype, Printing	1	....	3	....	3	....	....	....
Jones & McClench, Machine Shop	1	....	5	....	5	....	1	10
Knapp, Stout & Co., Flour	....	2	5	....	5	....	....	....
Kozel, James, Brewery	1	....	3	....	3	....	1	15
Mercier, C., Lumber	1	....	16	....	16	....	1	70
Nelson, Peterson & Josephson, Planing	1	....	7	....	7	....	1	50
Phoenix Brewery, Brewery	2	....	4	....	4	....	1	8
Rice Lake Creamery & Cheese Co, Creamery	1	....	2	....	2	....	1	10
Rice Lake Leader, Printing	1	....	3	....	3	....	....	....
Rice Lake Lumber Co., Lumber	7	....	200	....	200	....	11	960
Rice Lake Mfg. Co., Woodworking	1	....	12	....	12	....	1	30
Rice Lake Starch & Potato Co., Starch	2	....	10	....	10	....	1	50
Rice Lake Water Works, Water	1	....	5	....	5	....	2	150
Sandahl, J. A., Wagons	1	....	3	....	3	....	....	....
Total	23	2	287	....	287	....	21	1353
RICHLAND CENTER, RICHLAND CO.—								
Durnford, E. W., Contractor	1	....	6	....	6	....	....	....
Hallin, J. B., Monuments	1	....	5	....	5	....	....	....
James, N. L., Lumber	1	....	10	....	10	....	1	60
Krouskop, A. H., Lumber	11	....	36	....	36	....	2	180
Parfery, A. C., Lumber & Excelsior	2	....	7	....	7	....	....	....
Parfery, A. C., Flour & Feed	....	1	1	....	1	....	....	....
Republican & Observer, Printing	1	....	2	1	3	....	....	....
Richland Center Water Wks, Water	1	....	1	....	1	....	2	120
Snow Bros., Barrels, Butter Tubs etc	3	....	12	....	12	....	1	20
Snow White Laundry, Laundry	1	....	2	2	4	....	1	12
Strang, Geo. H., Light	2	....	3	....	3	....	2	160
The Democrat, Printing	1	....	2	1	3	....	....	....
The Rustic, Printing	1	....	2	2	4	1	....	....
Total	26	1	89	6	95	1	9	552
RIPON, FOND DU LAC CO.—								
Bouton & Germain Co., Gloves & Mittens	3	....	10	20	30	....	....	....
Haas, John, Brewery	4	1	5	....	5	....	1	40
Heath & Butzke Carriage Co., Car. & Wagons	1	1	25	....	25	....	....	....
Marshal, B. G., Repair Shop	1	....	1	....	1	....	....	....
Ripon Knitting Works, Hosiery & Gloves	1	1	50	120	170	6	1	50
Ripon Produce Co., Creamery	3	....	5	....	5	....	1	20

ESTABLISHMENTS INSPECTED.

Location, Name and Business.	Buildings.		Employes.				Boilers.	
	Under 3 stories.	Three or more stories.	Male.	Female.	Total.	Under 16 yrs. of age.	Number.	Total horse power.
RIPON—Continued.								
Ripon Roller Mills, Flour	2	1	4	....	4	....	1	80
Ripon Steam Laundry, Laundry	1	....	1	3	4	....	1	24
Schaefer, W. E., Mfg. Co., Foundry	2	....	4	....	4	....	....	....
Timms, C. J., Boxes & Veneer	1	....	10	....	10	1	1	50
Total	19	4	115	143	258	7	6	264
RIVER FALLS, PIERCE CO.—								
Diers Sheet Metal Works, Sheet Metal	1	....	3	....	3	....	....	....
Fortune, Geo., & Co., School Furniture	....	1	2	....	2	....	....	....
Hemenway, J. S. Co., Feed	1	....	4	....	4	....	....	....
Lund, A. W., Wagons	3	....	15	....	15	....	1	25
Prairie Mills, Flour	1	2	5	....	5	....	....	....
Putnam, W. H., Flour	....	1	3	....	3	....	....	....
River Falls Bldg. Mfg. Co., Wood Working	1	....	4	....	4	....	....	....
River Falls Journal, Printing	1	....	3	1	4	....	....	....
Riv. Falls L't. Heat & Power Co., Light, etc.	2	....	3	....	3	....	2	35
Smith, Geo. D., Wagons	1	....	4	....	4	....	1	15
The Times, Printing	1	....	4	....	4	....	....	....
Tubbs Medicine Co., Laboratory	1	....	3	1	4	....	....	....
Ulrich, F. N., Tile	1	....	7	....	7	....	....	....
Wisconsin Elevator Co., Elevator	....	1	2	....	2	....	1	40
Total	14	5	62	2	64	....	5	115
RUSK, DUNN CO.—								
Kristensen, N. K., Tank Works	1	....	3	....	3	....	1	34
Farmers' Co-operative Dairy Ass'n, Creamery	2	....	8	....	8	....	1	36
Wisconsin Elevator Co., Elevator	2	....	2	....	2	....	....	....
Total	5	....	13	....	13	....	2	60
SANBORN, ASHLAND CO.—								
McBride, B., Lumber	1	....	10	....	10	....	1	60
Sanborn Cheese & Creamery Co., Creamery	1	....	2	....	2	....	1	12
Total	2	....	12	....	12	....	2	72
SATUIT, ONEIDA CO.—								
Keyn, Henry, Lumber	2	....	25	....	25	....	3	200
SAWYER, DOOR CO.—								
Door County Canning Co., Canning	6	....	100	50	150	....	3	240
SHAWANO, SHAWANO CO.—								
City Elec. Lt. & Water Wks., Lt. & Water	1	....	3	....	3	....	3	225
Chicago & Northwestern Ry., Shops	1	....	1	....	1	....	1	80
Danzel, Frank, Bottling Works	1	....	3	....	3	....	....	....
Engle, C. F., Flour	3	....	4	....	4	....	1	80
Keller, F. H., Laundry	1	....	1	2	3	....	1	10
Leig & Dillenberg, Elevator	1	....	2	....	2	....	....	....
Raddant, Emil T., Brewing Co.	2	1	12	....	12	....	1	80
Schroeder, G., Wagons	1	....	5	....	5	....	....	....
Shawano County Journal, Printing	1	....	4	2	6	....	....	....
Wochenblatt & Volksblatt, Printing	1	....	3	2	5	....	....	....
Wolf River Paper & Fiber Co., Paper	19	1	144	6	150	3	8	1200
Total	32	2	182	12	194	3	15	1675
SHEBOYGAN, SHEBOYGAN CO.—								
Aladdin Soap Co., Soaps	....	1	7	....	7	....	1	50
American Hide & Leather Co., Leather	2	3	275	....	275	8	7	660
American Mfg. Co., Chairs	....	2	345	5	350	14	2	250

ESTABLISHMENTS INSPECTED.

Location, Name and Business.	Buildings,		Employes.				Boilers.	
	Under 3 stories.	Three or more stories.	Male.	Female.	Total.	Under 16 yrs. of age.	Number.	Total horse power.
SHEBOYGAN—Continued.								
Badger State Tanning Co., Tannery	2	2	150	....	150	1	5	445
Balzer, John, Jr., Wagons	1	1	18	....	18	....	1	35
Big Hat Laundry, Laundry	1	....	3	8	11	....	1	20
Chicago Parlor Furn. Co., Furniture	....	1	21	3	24	....	1	125
Columbia Shoe Co., Boots & Shoes	1	....	15	8	23	....	....	....
Crocker Chair Co., Chairs	1	8	420	75	495	78	8	1050
Demokrat Printing Co., Printing	1	....	15	....	15	....	....	....
Dillingham Mfg. Co., Ice Boxes	....	2	200	....	200	25	3	210
Excelsior Steam Laundry, Laundry	1	....	2	4	6	....	1	20
Excelsior Wrapper Co., Excelsior Wrappers	1	....	59	6	65	2	3	600
Freyberg Lumber Co., Lumber	....	1	20	....	20	....	2	100
Frost's Veneer Seating Co., Veneer	....	1	258	2	260	....	3	350
Garton Toy Co., Toys	....	2	240	10	250	30	2	160
Globe Foundry & Machine Co., Machines	2	....	25	2	27	2	....	....
Gutsch Brewing Co., Brewery	1	1	27	10	37	4	2	140
Howe, L. K., Printing	1	....	5	7	12	....	....	....
Jenkins Machine Co., Machines	2	....	40	....	40	....	1	30
Jung Carriage Co., Wagons & Sleighs	1	....	6	....	6	....	....	....
King, Arthur, Pianos	....	1	60	....	60	1	....	....
Mattoon Mfg. Co., Furniture	....	4	650	....	650	56	8	800
McAnsh, Dwyer Co., Storage	....	2	12	....	12	....	....	....
Muller, H. G., Novelties	....	1	20	....	20	....	1	100
Musical Instrument Mfg. Co., Musical Inst.	1	....	6	....	6	....	....	....
Novelty Mfg. Co., Novelties	....	2	75	....	75	....	1	100
Optenberg & Sonnemann, Boilers	1	....	20	....	20	....	1	25
Phoenix Chair Co., Chairs	....	3	420	10	430	28	3	385
Port Huron Salt Co., Salt	2	....	42	....	42	2	....	....
Preussler & Sons, Comb Cases	1	1	38	....	38	....	2	150
Schmid & Co., R. H., Boxes	....	1	10	....	10	....	1	25
Sellinger, Ross Co., Gloves	....	1	60	175	235	32	....	....
Sheboygan Brick & Tile Co., Brick	1	....	16	....	16	....	1	30
Sheboygan Chair Co., Chairs	....	2	415	28	443	22	2	550
Sheboygan Cigar Mold Co., Cigar Molds	1	....	....	46	46	12	1	70
Sheboygan Coal Co., Fuel	1	....	10	....	10	....	1	150
Sheboygan Daily Journal, Printing	....	1	5	6	11	....	....	....
Sheboygan Knitting Co., Knitting	1	....	15	135	150	26	2	200
Sheboygan Lt., Power & Ry. Co., Light	1	....	6	....	6	....	3	375
Sheboygan Mineral Water Co., Bottling	....	1	7	17	24	....	1	75
Sheboygan Parlor Furniture, Parlor Suits	....	1	60	....	60	....	2	160
Sheboygan Steam Laundry, Laundry	1	....	1	10	11	....	1	30
Sheboygan Volksblatt, Printers	1	....	2	2	4	....	....	....
Spratt, Geo. & Co., Chairs	2	....	100	8	108	9	1	150
The Albert Landreth Co., Canning	2	....	60	....	60	....	2	75
The Globe Factory & Machine Co., Foundry	2	....	25	....	25	....	....	....
The K. Schreier Co., Brewery	....	2	48	....	48	....	2	200
The Jacob J. Vollrath Mfg. Co., Foundry	5	1	325	100	425	....	2	220
The Sheboygan Telegram, Printing	1	....	7	5	12	....	....	....
Twig, Otto L., Shoe Co., Boots & Shoes	1	....	12	5	17	....	....	....
Winter Lumber Co., Lumber	1	1	100	....	100	....	2	160
Zimbal & Son, Brick	1	....	23	....	23	....	1	50
Zimmerman, E. F., Printing	1	....	1	4	5	....	....	....
Zurheide & Co., Brick	1	....	15	....	15	....	1	45
Total	47	50	4817	691	5508	352	85	8370
SHEBOYGAN FALLS, SHEBOYGAN CO.—								
Brickner Woolen Mills Co., Woolen Goods	....	1	42	43	85	....	1	125
Falls Machine Co., Machine Shops	2	....	35	....	35	....	1	60
Richardson Bros., Chairs & Cheese Boxes	1	....	57	....	57	3	1	90
Wiesse, Chas. & Co., Tanners	....	1	51	....	51	....	3	300
White Wagon Works, Toy Wagons	....	1	24	....	24	1	1	50
Total	3	3	219	43	262	4	7	625

ESTABLISHMENTS INSPECTED.

Location, Name and Business.	Buildings.		Employes.				Boilers.	
	Under 3 stories.	Three or more stories.	Male.	Female.	Total.	Under 16 yrs. of age.	Number.	Total horse power.
SHELL LAKE, WASHBURN CO.—								
Dionne, J. & Son, Woodworking	1	....	3	....	3	....	1	8
Shell Lake Co-operative Creamery, Creamery	1	....	1	....	1	....	1	8
Shell Lake Lumber Co., Lumber	6	....	70	....	70	....	5	420
Shell Lake Watchman, Printing	1	....	2	....	2	....	1	6
Washington Co. Register, Printing	1	....	7	....	7	....	1	12
Water Works, Water	1	....	2	....	2	....	....	....
Total	11	....	85	....	85	....	9	454
SOLON SPRINGS, DOUGLAS CO.—								
Gander, Frank, Lumber	2	....	8	....	8	....	1	60
SOUTH MILWAUKEE, MILWAUKEE CO.—								
Bucyrus Co., Steam Dredges	14	....	650	....	650	4	4	375
Columbia Mineral Wool Co., Mineral Wool	4	....	20	....	20	....	2	160
Eagle Horse-Shoe Co., Horse Shoes	9	....	350	....	350	....	9	1000
Enterprise Mfg. Co., Boxes	2	....	20	....	20	....	1	60
Milw. Elec. Ry. & Lt. Co., Light & Power	1	....	2	....	2	....	1	200
Moore-Whitmore Co., Baskets	9	1	60	....	60	3	2	120
Northern Wire & Cable Co., Wire & Cable	4	1	11	1	12	....	2	160
Racine Fire Exting. Co., Fire Extinguishers	1	....	16	....	16	....	....	....
Schipkowsky, J., Woodworking	1	....	2	....	2	....	....	....
South Milwaukee Lumber Co., Planing	10	....	5	....	5	....	1	25
South Milwaukee Water Works, Water	1	....	2	....	2	....	1	150
Stowell Mfg. & Foundry Co., Hardware	17	....	396	4	400	7	2	150
Webster Mfg. Co., Chain Belts	1	....	8	....	8	....	....	....
Total	70	2	1542	5	1547	14	25	2400
SOUTH WAYNE, LAFAYETTE CO.—								
Fingleft, C. P., Creamery	1	....	1	....	1	....	1	15
SPARTA, MONROE CO.—								
City Steam Laundry, Laundry	1	....	6	3	9	....	1	12
Eckhart, Fred, Elevator	1	....	2	....	2	....	1	15
Evans, J. W., Sash & Doors	1	....	4	....	4	....	....	....
Herald-Advertiser, Printing	1	....	3	2	5	....	....	....
McEachron Roller Mills, Elevator	1	....	2	....	2	....	....	....
Monroe Co. Democrat, Printing	1	....	3	3	6	....	....	....
Newton, O. L., Sons Co., Lighting	1	....	1	....	1	....	....	....
Sparta Herold, Printing	1	....	3	2	5	....	....	....
Sparta Iron Works Co., Machine Shops	8	....	21	1	22	....	1	20
Sparta Sash & Door Co., Sash & Doors	2	....	2	....	2	....	....	....
Sparta Water Works, Water	1	....	1	....	1	....	2	160
Total	19	....	48	11	59	....	3	207
SPOONER, WASHBURN CO.—								
Spooner Lumber Co., Lumber	1	....	10	....	10	....	1	40
STANLEY, CHIPPEWA CO.—								
City Water Works, Water	1	....	2	....	2	....	....	....
Goshaw & Glauque, Lumber	1	....	20	....	20	....	1	80
Grubb, F. S., Flour	1	....	3	....	3	....	1	30
Northern Lumber Co., Lumber	11	....	300	....	300	4	15	700
Stanley Creamery Co., Creamery	1	....	3	....	3	....	1	25
U. S. Leather Co., Tannery	9	....	100	....	100	....	4	500
Total	24	....	428	....	428	4	22	1335
STAR LAKE, VILAS CO.—								
C., St. P., Minn. & Omaha Ry., Pump House	1	....	1	....	1	....	1	20
Salsich & Wilson, Lumber	9	....	175	....	175	....	7	590
Total	10	....	176	....	176	....	8	610

ESTABLISHMENTS INSPECTED.

Location, Name and Business.	Building.		Employes.				Boilers.	
	Under 3 stories.	Three or more stories	Male.	Female.	Total.	Under 16 yrs. of age	Number.	Total horse power.
STETSONVILLE, TAYLOR CO.—								
Ellingson, C. K., Lumber	2	....	30	....	30	....	2	120
STEVENS POINT, PORTAGE CO.—								
Bennet, D., Bakery	1	....	3	1	4	....	1	5
Central City Iron Works, Gas Engines	5	....	35	1	36	....	1	100
Clifford & Fox Lumber Co., Lumber	7	....	66	....	66	....	4	280
Coye Furniture Co., Furniture	8	1	133	2	135	....	2	180
Frost, Miss C. J., Novelties	1	....	3	70	73	15	....	....
Gazette, Printing	1	....	5	2	7	....	....	....
Jackson Milling Co., Flour	2	3	13	....	13	....	....	....
Kashellek, R. F., Gas Engines	1	....	2	....	2	....	....	....
Kuhl, Chas. G., Soda Water	1	....	2	....	2	1	1	8
Mitchell, W. W., Flour & Feed	1	....	2	....	2	....	1	40
Mitchell, W. W., Lumber	2	....	21	....	21	1	1	90
Pfiffner Co., Planing	6	....	21	....	21	4	1	80
Plover Paper Co., Paper	4	1	140	60	200	1	4	360
Racine Knitting Co., Knitting	2	....	42	4	46	1	....	....
Rice, John, & Bro. Co., Foundry	5	....	33	1	34	1	1	50
Rolnik, Printing	1	....	5	1	6	1	....	....
Stevens Point Box Co., Boxes	5	....	22	....	22	4	1	100
Stevens Point Brewing Co., Brewing	6	4	15	....	15	....	2	160
Stevens Point Elec. Light Co., Light	4	....	10	....	10	....	3	240
Stevens Point Journal, Printing	1	....	5	3	8	....	....	....
Stevens Point Water Co., Water	1	....	2	....	2	....	2	200
Week, John, Lumber Co., Lumber	14	....	91	....	91	....	2	300
Western Wall Paper Co., Wall Paper	2	....	29	11	40	1	1	150
Wisconsin Bedding Co., Bedding	2	....	18	2	20	....	1	100
Wisconsin Best Laundry, Laundry	2	....	4	25	29	....	1	40
Wisconsin River Paper & Pulp Co., Paper	6	....	141	10	151	....	4	300
Vetter Mfg. Co., Sash & Doors	7	....	23	....	23	1	1	80
Total	98	9	886	193	1079	31	35	2863
STILES, OCONTO CO.—								
Anson-Eldridge Co., Lumber	24	....	135	....	135	....	8	590
STOUGHTON, DANE CO.—								
American Cigar Co., Tobacco Warehouse	2	....	80	70	150	10	....	....
Ammundson, Peter, Bicycles	1	....	3	....	3	....	....	....
City Water Works, Water	1	....	2	....	2	....	2	160
Cohn, Jacob & Co., Tobacco Warehouse	1	....	10	30	40	5	....	....
Cullman Bros., Tobacco Warehouse	1	....	20	....	20	6	....	....
Diamond Laundry, Laundry	1	....	1	2	3	....	....	....
Green, M. C., Tobacco Warehouse	1	....	20	15	35	2	....	....
Gunderson, Osmund, Tobacco Warehouse	....	1	5	20	25	1	....	....
Halverson & Britters, Tobacco Warehouse	1	....	9	....	9	2	....	....
Hemsing, O. H., Tobacco Warehouse	1	....	32	15	47	....	....	....
Johnson, M. B., Wagons & Repairs	1	....	1	....	1	....	....	....
Lee, O. C., Tobacco Warehouse	1	....	33	12	45	4	....	....
Mandt Wagon Co., Wagons	26	3	340	2	342	....	2	235
Midgard, A., Printing	1	....	1	....	1	....	....	....
Olson, N. F., Wagons	1	....	6	....	6	....	....	....
Peterson, S., Wagons	1	....	5	....	5	....	....	....
Roe, O. K., Tobacco Warehouse	1	....	20	30	50	....	....	....
Stoughton Courier, Printing	1	....	3	....	3	....	....	....
Stoughton Milling Co., Flour	1	1	5	....	5	....	....	....
Stoughton Wagon Co., Wagons	5	1	198	2	200	....	2	230
The Hub, Printing	1	....	3	2	5	....	....	....
Vinjem, L. N., Boxes	2	....	5	....	5	....	....	....
Total	52	6	802	200	1002	30	6	625

ESTABLISHMENTS INSPECTED.

Location, Name and Business.	Buildings.		Employes.				Boilers.	
	Under 3 stories.	Three or more stories.	Male.	Female.	Total.	Under 16 yrs. of age	Number.	Total horse power.
STURGEON BAY, DOOR CO.—								
Lyon Bros. & Co., Elevator	1	....	2	....	2	....	....	....
Pankrantz Lumber Co., Lumber	4	....	35	....	35	....	2	160
Rebalt & Walters, Ship Yard	4	....	25	....	25	....	1	60
Shaw, A., & Co., Flour	1	1	4	....	4	....	1	40
Sturgeon Bay Wagon Co., Wagons	1	....	5	....	5	....	....	....
The Reynolds Preserving Co., Canning	6	....	150	50	200	40	4	500
Tutis & Brandise, Elevator	1	....	2	....	2	....	....	....
Washburn & Co., Lumber & Planing	4	....	25	....	25	....	1	80
Washburn & Co., Elevator	1	....	2	....	2	....	....	....
Total	23	1	250	50	300	40	9	840
SUPERIOR, DOUGLAS CO.—								
Amenia & Sharm Land Co., Elevator	2	....	8	....	8	....	....	....
American Bedding Co., Bedding	1	....	20	5	25	1	1	60
American Grass Twine Co., Grass Twine	2	....	125	125	250	28	2	200
American Ship Building Co., Ship Building	9	....	1500	....	1500	46	9	950
American Heating Co., Steam Heating	1	....	15	....	15	....	....	....
Baldwin Laundry, Laundry	1	....	4	10	14	....	....	....
Broadway Laundry, Laundry	1	....	10	60	70	....	2	70
Brown Hoisting Co., Hoisting	1	....	22	....	22	....	....	....
Buffalo Oil Co., Oil	1	....	8	....	8	....	....	....
Carlson Bros., Roofing	1	....	5	....	5	....	....	....
Clarion Citizen, Printing	1	....	5	....	6	....	....	....
Cowdin, H. F., Sash & Doors	2	....	25	....	25	....	1	45
Cowie Bros., Sash & Doors	2	....	10	....	10	....	1	60
Daily Leader, Printing	....	1	18	1	19	....	....	....
Downs, D., Patterns	1	....	2	....	2	....	....	....
Duffy, J. A., Carriages	1	....	7	....	7	....	....	....
Duluth-Superior Traction Co., Power	1	....	5	....	5	....	3	500
Enterprise Laundry Co., Laundry	1	....	4	16	20	1	1	45
Evening Telegram, Printing	1	....	33	2	35	....	....	....
Frankman Bros., Pile Drivers	1	....	45	....	45	....	1	20
Geyser Bottling Works, Bottling	1	....	3	....	3	....	....	....
Globe Elevator Co., Elevator	3	3	40	....	40	....	4	700
Great Northern Elevators, Elevators	3	3	75	....	75	1	....	....
Great Northern Ry., Flour Sheds	2	....	250	....	250	....	4	600
Great Northern Ry., Shops	7	....	600	....	600	....	....	....
Hall Elevator Co., Elevator	....	1	6	....	6	....	3	450
Holmes Bros. Co. Roofing	1	....	15	....	15	....	2	160
Hotel Superior, Power House	1	....	3	....	3	....	....	....
Johnson, H., Shop	1	....	2	....	2	....	3	240
Klinkert Brewing & Malt Co., Brewery	1	1	8	1	9	....	....	....
Lake Superior Bag Co., Bags	....	1	30	35	65	3	2	100
Lake Superior Contracting & Dredge Co., Contracting, etc.	3	....	100	....	100	....	1	60
Lake Superior Terminal & Trans. Co., Shop	1	....	12	....	12	....	2	100
Lauger Bros., Shingles	1	....	18	....	18	....	1	40
Lehigh Valley Coal Co., Docks	10	....	40	....	40	....	1	45
Martin, L. R., Shingles	3	....	25	....	25	....	2	400
Mast, R. C., Bindery	1	....	6	4	10	1	1	25
Mullen, Wm., Sawing	1	....	10	....	10	....	....	....
National Boiler Works, Boilers	1	....	40	....	40	....	1	40
North American Telegraph Co., Telegraphing	1	....	5	....	5	3	1	50
Northern Brewing Co., Brewery	1	1	20	....	20	....	2	175
Northwestern Fuel Co., Fuel	17	....	293	....	293	2	10	1475
Northwestern Machine & Boiler Works, Mach.	1	....	65	....	65	....	2	65
Pellister, C. D., Co., Woodworking	1	....	5	....	5	....	....	....
Penn, Wm., & Co., Stone	4	....	50	....	50	2	2	65
Rogers & Ruger, Planing	2	....	25	....	25	....	1	65
Ross, J. L., Co., Elevator	....	1	10	....	10	....	....	....
Ross, P., Bicycles	1	....	2	....	2	....	....	....
Schofield, Edw., & Co., Lumber	3	....	225	....	225	2	5	350
Shunn, W. H., Woodworking	1	....	10	....	10	....	....	....
Silver, Tonsberg & Co., Printing	1	....	7	....	7	....	....	....
Skamur, G., Show Cases	1	....	4	....	4	....	....	....

ESTABLISHMENTS INSPECTED.

Location, Name and Business.	Buildings.		Employes.				Boilers.	
	Under 3 stories.	Three or more stories	Male.	Female.	Total.	Under 16 yrs of age	Number.	Total horse power
SUPERIOR—Continued.								
Slender & Dittmer, Carriages	1	....	10	....	10	....	1	12
Superior Boiler Works, Boilers	1	....	8	....	8	....	....	....
Superior Broom Works, Brooms	1	....	3	....	3	....	....	....
Superior Creamery Co., Creamery	1	....	5	....	5	....	1	15
Superior Iron Works, Iron	1	....	35	....	35	....	....	....
Superior Mfg. Co., Builders' Supplies	5	....	45	5	50	5	1	40
Superior Rug Mfg. Co., Rugs	1	....	2	3	5	....	1	60
Superior Water, Light & Power Co., Water	2	....	10	....	10	....	4	660
U. S. Gypsum Co., Gypsum	1	....	12	....	12	....	1	75
Webster Mfg. Co., Chairs	8	3	225	25	250	10	4	425
Weditz, H., Brushes	1	....	1	2	3	....	....	....
Western Union Telegraph Co., Telegraph	1	....	9	....	9	4	....	....
West Superior Bedding Co., Bedding	1	....	12	3	15	....	1	40
Whitney Bros., Contractors	1	....	100	....	100	....	2	50
Wilcox, D. B., Woodworking	1	....	6	....	6	....	....	....
Wright Foundry & Machine Works, Foundry	1	....	25	....	25	....	1	25
Total	134	15	4383	297	4680	109	88	8557
SURING, OCONTO CO.—								
Suring Lumber Co., Lumber	4	....	30	....	30	....	1	80
THORP, CLARK CO.—								
Boardman, E. A., & Sons, Lumber	1	....	7	....	7	....	1	75
Cirkle Mfg. Co., Staves	2	....	40	....	40	8	2	120
City Water & Electric Co., Water, etc	1	....	4	....	4	....	2	160
Colby Bros., Feed & Lumber	1	....	6	....	6	....	1	50
Total	5	....	57	....	57	8	6	405
TOMAH, MONROE CO.—								
C., M. & St. P. Ry. Co., Shops	5	....	45	....	45	....	2	120
Clark, W. H., Flour & Feed	2	....	2	....	2	....	1	20
Durant, J. W., & Son, Machine Shop	1	....	4	....	4	....	....	....
Farmers' Co-operative Butter Ass'n, Creamery	2	....	2	....	2	....	1	20
Goodyear, C. A., Lumber	12	....	163	1	164	....	6	340
Hill & Reynolds, Furniture	2	....	3	....	3	....	1	20
Schultz, W. H., Flour & Feed	2	....	5	....	5	....	1	45
Tomah City Elec. Light Works, Light	1	....	4	....	4	....	2	160
Tomah City Water Works, Water	1	....	1	....	1	....	2	120
Tomah Herald, Printing	1	....	2	1	3	....	....	....
Tomah Journal, Printing	1	....	3	....	3	....	....	....
Tomah Monitor, Printing	2	....	3	....	3	....	....	....
Total	32	....	237	2	239	....	16	845
TOMAHAWK, LINCOLN CO.—								
Bay Mill Co., Lumber	6	....	100	....	100	....	4	400
Bradley Lumber Co., Lumber	6	....	220	....	220	....	6	600
E'rn and W'rn Tannery Co., Tannery	2	....	10	....	10	....	1	50
Farmers' Lumber Co., Lumber	2	....	20	....	20	....	1	75
Marinette, Tomahawk & W. Ry., Shops	2	....	6	....	6	....	....	....
Mitchell Hotel, Steam Plant	1	....	2	....	2	....	1	150
The Neal, D. C. & C. A., Wood Co., Kindling	1	....	35	....	35	2	1	50
The Tomahawk, Printing	1	....	4	1	5	....	....	....
The Tomahawk Leader, Printing	1	....	1	1	2	....	....	....
Tomahawk Excelsior Co., Excelsior	3	....	25	....	25	....	2	125
Tomahawk Iron Works, Iron	5	....	16	....	16	....	1	100
Tomahawk Pulp & Paper Co., Pulp & Paper	4	....	25	....	25	....	3	180
Tomahawk Stave & Veneer Co., Staves, etc	3	....	10	....	10	....	1	160
Tomahawk Steam Laundry, Laundry	1	....	1	3	4	....	....	....
Tomahawk Water Works, Water	1	....	2	....	2	....	1	120
Total	39	....	377	5	382	2	22	2010

ESTABLISHMENTS INSPECTED.

Location, Name and Business.	Buildings.		Employes.				Boilers.	
	Under 3 stories.	Three or more stories	Male.	Female.	Total.	Under 16 yrs. of age.	Number.	Total horse power.
TRAMWAY, DUNN CO.—								
Kirkland Brick Co., Brick	5	....	50	....	50	....	2	120
TWO RIVERS, MANITOWOC CO.—								
Aluminum Mfg. Co., Novelties	1	....	90	45	135	8	1	125
Aluminum Sign Co., Signs	1	....	7	4	11	....	1	20
Eggers, F., Veneer Seat Co., Veneer Seats	....	1	151	9	160	11	2	240
Fuler Hosiery Co., Knitting	....	1	....	30	30	5	....	....
Hamilton Mfg. Co., Printers' Supplies	1	1	428	22	450	43	3	350
Kahlenberg Bros., Gasoline Engines	1	....	22	....	22	....	....	....
Mueller Bros. Brewing Co., Brewery	6	....	5	....	5	1	1	30
Two Rivers Knitting Mill, Knitting	2	....	2	30	32	5	....	....
Two Rivers Mfg. Co., Lumber & Planing	13	3	285	15	300	....	8	900
Two Rivers Mfg. Co., Wooden Ware	....	1	285	15	300	29	3	250
Two Rivers Municipal Water & Light Co., Water, etc.	2	....	3	....	3	....	2	200
Vandernil, E. J., Canning Co., Canning	6	....	85	50	135	22	2	160
Western Steel Gate Co., Gates	1	1	5	....	5	....	....	....
Zulu Hosiery Co., Hosiery	1	1	3	23	26	....	....	....
Total	35	9	1371	243	1614	124	23	2275
WASHBURN, BAYFIELD CO.—								
Akley & Sprague, Lumber	5	....	200	....	200	2	11	1880
Fowler-Jacobs Co., Lumber	1	....	35	....	35	....	2	100
Hines Lumber Co., Lumber	5	....	250	....	250	....	16	1550
Kentfield & Lamoreaux, Boxes	2	....	56	....	56	1	1	55
Northwestern Fuel Co., Fuel	3	....	60	....	60	....	2	400
Nye, Jenks & Co., Elevator	2	....	25	....	25	....	2	700
Standard Steam Laundry, Laundry	1	....	2	1	3	....	1	12
Steinert, A., & Co., Machine Shop	1	....	4	....	4	....	1	12
Thompson Lumber Co., Lumber	1	....	100	....	100	....	8	700
Washburn Electric Light & Power Co., Light	1	....	4	....	4	....	2	150
Washburn Machine Works, Repairs	1	....	2	....	2	....	....	....
Washburn Steam Laundry, Laundry	1	....	2	5	7	....	1	20
Total	24	....	740	6	746	3	47	5579
WATERTOWN, JEFFERSON AND DODGE CO.'S—								
American Malting Co., Malt	2	4	26	....	26	....	3	245
Archie, J. J., & Son, Monuments	1	....	12	....	12	....	....	....
Badger State Bottling Works, Soda Water	1	....	8	....	8	....	1	8
Biefeld, Otto & Co., Machine Shops	2	....	15	....	15	....	1	15
Brandt-Dent Co., Gas Fixtures & Cashiers	1	1	49	1	50	1	....	....
Dornfeld-Kunert Co., Machine Shops	8	....	54	....	54	....	1	50
Hartig, Wm., Brewery	8	2	30	....	30	2	6	310
Henry, Ira L., Co., Paper Boxes	1	1	31	106	137	30	1	40
Jahnke Creamery Co., Creamery	4	....	5	....	5	....	1	30
Kehr & Gevers, Machine Shop	1	....	4	....	4	1	....	....
Koenig, R. P. & Co., Flour & Feed	3	2	8	....	8	....	1	100
Kohl, P., Dyeing	1	....	2	....	2	....	1	5
Lemmerhirt, H. & Co., Cooperage	2	....	6	....	6	....	....	....
Lewis, G. B., & Co., Bee Supplies	3	2	64	5	69	7	2	120
New Method Steam Laundry, Laundry	1	....	2	3	5	....	1	8
Nienow-Bursinger, Machine Shops	1	....	5	....	5	....	....	....
The Gazette, Printing	....	1	3	....	3	....	....	....
The Globe Milling Co., Flour & Feed	4	1	14	....	14	....	2	205
Times Publishing Co., Printing	1	....	6	....	6	....	....	....
Watertown Electric Light Co., Lighting	2	....	7	....	7	....	3	180
Watertown Foundry Co., Foundry	1	....	7	....	7	....	....	....
Watertown Gas Light Co., Gas	2	....	6	....	6	....	1	40
Watertown Grain Co., Elevator	3	....	5	....	5	....	....	....
Watertown Republican, Printing	1	....	3	....	3	....	....	....

ESTABLISHMENTS INSPECTED.

Location, Name and Business.	Buildings. Under 3 stories.	Buildings. Three or more stories	Employes. Male.	Employes. Female.	Employes. Total.	Employes. Under 16 yrs of age.	Boilers. Number.	Boilers. Total horse power.
WATERTOWN—Continued.								
Watertown Steam Laundry, Laundry	1	....	3	5	8	....	1	30
Watertown Table Slide Co., Table Slides	4	....	15	1	16	3	1	40
Watertown Water Works, Water	2	....	2	....	2	....	2	160
Watertown Weltbuerger, Printing	1	....	8	1	9	1	....	....
Wells, M. D., Co., Shoes	3	....	35	22	57	2	....	....
Wiens, A. R., Brushes	3	....	13	2	15	2	1	30
Total	68	14	448	146	594	49	30	1616
WAUKESHA, WAUKESHA CO.—								
Blair Bros., Foundry & Machines	3	1	9	....	9	....	....	....
Brimmer, J. J., Elevator	....	1	4	....	4	....	1	35
Heintz Mineral Spring Co., Bottling	1	....	10	....	10	....	....	....
Milwaukee-Waukesha Brewing Co, Brewery	1	1	35	10	45	....	2	280
Modern Steel Structure Co., Steel Structures.	2	....	160	....	150	....	2	200
The Waukesha Arcadian Co., Bottling	1	....	15	....	15	....	1	30
Waukesha Malleable Iron Co., Malleable Iron	3	....	200	....	200	....	3	325
Waukesha Mfg. Co., Boxes	1	....	7	....	7	....	1	20
White Rock Mineral Springs Co., Bottling	3	1	50	1	51	....	1	40
White Rock Mineral Springs, Bottling	3	1	50	1	51	....	1	40
Wilber Lumber Co., Lumber, Sash & Doors	4	....	40	....	40	....	1	85
Total	20	4	525	11	536	....	12	1015
WAUPACA, WAUPACA CO.—								
Central Lumber Co., Lumber	9	....	15	....	15	....	....	....
City Water Works, Water	1	....	1	....	1	....	....	....
Fallgalter Bros. Roller Mills, Flour	3	....	4	....	4	....	....	....
Nelson, A. G., Lumber Co., Lumber	9	....	6	....	6	....	....	....
Nelson, A. G., Co., Feed	....	1	4	....	4	....	....	....
Pioneer Foundry Co., Foundry	4	....	4	....	4	....	1	10
Republican, The, Printing	1	....	2	2	4	....	....	....
Strelow & Trachte Co., rCeamery	3	....	4	....	4	....	1	25
Union Starch Co., Starch	4	....	14	....	14	....	1	80
Waupaca Electric Light & Ry. Co., Light, etc.	3	....	2	....	2	....	2	140
Waupaca Post, Printing	1	....	5	1	6	....	....	....
Waupaca Record, Printing	1	....	2	2	4	....	....	....
Total	39	1	63	5	68	....	5	255
WAUPUN, FOND DU LAC CO.—								
Althouse-Wheeler Co., Agricultural Mach.	7	....	60	....	60	....	1	90
Atwood & Vesper, Creamery	1	....	2	....	2	....	1	20
Breyer Bros., Tanks	2	....	7	....	7	....	1	30
City Water & Light Co., Water, etc.	1	....	4	....	4	....	3	160
Henry, I. L., Co., Boxes	1	....	6	9	15	....	....	....
Kobe, L. P., Elevator	2	....	3	....	3	....	....	....
Morris, J. S., Carriage Co, Carriages, etc.	1	1	25	....	25	....	....	....
Olson, Ole, Plows	2	....	3	....	3	....	1	6
Rexwinkle & Glebrick, Elevator	1	....	4	....	4	....	....	....
Scany, John, Brewery	1	....	5	....	5	....	1	40
Schaler-Hartgerink Co., Umbrellas	1	....	15	35	50	....	....	....
Troy Laundry, Laundry	1	....	4	2	6	....	1	16
Wells, M. D., Co., Shoes	4	....	301	49	350	....	4	520
Zimmerman, F. F., & Son, Carriages	1	....	15	....	15	....	....	....
Total	26	1	454	95	549	....	13	882
WAUSAU, MARATHON CO.—								
Badger Laundry, Laundry	1	....	2	5	7	....	1	30
Barker & Stewart, Lumber	6	....	139	1	140	....	5	400
Central Wisconsin, Printing	1	....	4	1	5	....	....	....
Chicago Excelsior Co., Excelsior	3	....	13	....	13	....	1	100
Covey, Wm., Bottling	1	....	3	....	3	....	....	....
Curtis & Yale, Lumber	6	....	75	....	75	9	2	150

ESTABLISHMENTS INSPECTED.

Location. Name and Business.	Buildings		Employes.				Boilers.	
	Under 3 stories.	Three or more stories	Male.	Female.	Total.	Under 16 yrs. of age.	Number.	Total horse power.
WAUSAU—Continued.								
Curtis & Yale Co., Sash & Doors	7	2	388	2	390	23	8	480
Dreyer & Sons, Bottling	1	....	4	....	4	....	....	....
Frepzel, J. A., Machine Shop	2	....	3	....	3	....	1	45
Goodwillie Bros., Boxes	4	....	115	10	125	27	4	300
Herald Printing Co., Printing	1	....	3	1	4	....	....	....
Karas, S., Machine Shops	1	....	2	....	2	....	1	10
Kickbush Roller Mills, Flour	3	1	5	1	6	....	1	150
Marathon Granite Co., Stone	2	....	45	1	46	....	1	60
Mathie Brewing Co., Brewery	3	3	14	1	15	....	1	100
McEachron Roller Mills, Mills	5	2	20	....	20	....	....	....
Mortenson, Jacob, Lumber Co., Lumber	9	....	81	....	81	....	4	285
Murray, J. D., Mfg. Co., Machinery	5	1	43	2	45	....	1	60
Philosopher Press, The, Printing	1	....	3	1	4	....	....	....
Record, The Daily, Printing	1	....	8	1	9	....	....	....
Remmel Bros., Bottling	1	....	2	....	2	....	....	....
Ruder, Geo., Brewing Co., Brewery	2	2	15	....	15	....	2	120
Schwent, Kofski, Aug., Lumber	6	....	15	....	15	....	1	40
Stewart, Alexander, Lumber Co., Lumber	6	....	230	....	230	2	4	400
Stolzer, Paul F., Printing	1	....	7	....	7	2	....	....
Underwood Veneer Co., Veneer	13	....	124	1	125	11	4	300
U. S. Leather Co., Tannery	8	....	[illegible]	....	48	....	2	150
Wausau Box & Lumber Co., Boxes	8	....	135	....	135	10	2	180
Wausau Electric Light Co., Light, etc.	2	....	4	....	4	....	4	440
Wausau Excelsior Co., Excelsior	5	....	16	....	16	....	1	80
Wausau Laundry Co., Laundry	1	....	5	18	23	....	1	23
Wausau Novelty Co., Novelties	6	1	70	....	70	11	2	145
Wausau Pilot, Printing	1	....	6	2	8	2	....	....
Wausau Quartz Co., Sand	4	....	6	....	6	....	1	55
Wausau Sand Paper Co., Sand Paper	5	....	25	....	25	....	1	75
Wausau Water Works, Water	1	....	4	....	4	....	....	....
Wausau Wochenblatt, Printing	1	....	3	1	4	1	2	30
Werheim Mfg Co., Sash & Veneer	5	....	70	....	70	1	2	160
Wisconsin Box Co., Boxes	7	....	58	1	59	....	1	125
Yunke & Weise, Woodworking	3	....	12	....	12	....	1	20
Total	149	12	1825	50	1875	99	62	4503
WAUWATOSA, MILWAUKEE CO.—								
Bark, F. H., Upholstering	....	1	2	....	2	....	....	....
Castalia Bottling Works, Bottling	9	1	5	....	5	....	....	....
Lentz, A., Woodworking	6	....	26	....	26	....	1	60
Manegold, A. F. & L., Stone	9	....	20	....	20	....	2	75
Milwaukee Pickle Co., Pickles	18	....	50	....	50	....	1	10
Monarch Stone Quarry, Stone	8	....	60	....	60	....	2	175
Northwestern Chemical Co., Chemicals	1	....	5	....	5	....	1	60
Wauwatosa Milling, Fuel & Lumber Co., Milling, etc.	1	....	7	....	7	....	1	60
Wauwatosa Weekly News, Printing	1	....	2	....	2	....	....	....
Total	53	2	177	....	177	....	8	440
WEST ALLIS, MILWAUKEE CO.—								
Allis-Chalmers Co., Machinists	12	3	1400	....	1400	5	5	1500
Kearney & Trecker, Machinists	4	....	60	....	60	1	1	65
Prescott Steam Pump Co., Pumps	10	1	188	2	190	....	2	150
Rosenthal Corn Husker Co., Huskers	5	....	18	....	18	....	....	....
The Milwaukee Electric Co., Power	5	....	225	25	250	3	3	400
Tobin, Gerlinger Steel Casting Co., Foundry	2	....	15	....	15	....	1	25
West Allis Malleable Iron & Chain Belt Co.	5	....	125	....	125	12	2	200
Total	43	4	2031	27	2058	21	14	2340
WEST BEND, WASHINGTON CO.—								
Adam, Kuethaer, Roller Mills	1	1	5	....	5	....	....	....
C. & N. W. Ry., Shops	1	....	1	....	1	....	1	60

ESTABLISHMENTS INSPECTED.

Location, Name and Business.	Buildings.		Employes.				Boilers.	
	Under 3 stories	Three or more stories	Male.	Female.	Total.	Under 16 yrs. of age.	Number.	Total horse power.
WEST BEND—Continued.								
Enger-Kress Pocket Book Co, Pocket Books..	1	....	60	30	90	7	....	....
Maxon & Dow, Creamery	1	....	4	....	4	....	....	....
Pick-Fohn Co., Shop	1	....	2	....	2	....	....	....
Schmidt & Stork, Wagon Works	4	....	40	....	40	....	1	40
Silberzahn Bros., Iron	1	....	4	....	4	....	....	....
Silberzahn Mfg. Co., Agricultural Mach.	4	....	26	....	26	....	1	80
West Bend Brewing Co., Brewery	3	3	35	....	35	....	5	330
West Bend Co-operative Creamery, Creamery	1	....	2	....	2	....	1	12
West Bend Knitting Mills, Knitting	1	....	9	26	35	....	....	....
West Bend Pearl Button Co., Pearl Buttons ..	1	....	12	8	20	....	....	....
West Bend Steam Laundry, Laundry	1	....	1	3	4	....	1	15
Total	21	4	201	67	268	7	10	537
WESTBORO, TAYLOR CO.—								
Frank, Aug. H., Woodworking	1	....	3	....	3	....	....	....
Langenberg Brick Co., Brick	1	....	25	....	25	....	1	40
Westboro Lumber Co., Lumber	4	....	110	....	110	....	7	610
Total	6	....	138	....	138	....	8	650
WEST SALEM, LA CROSSE CO.—								
Nonpariel-Journal, Printing	1	....	2	2	4	....	....	....
Neshonoc Electric Light Co., Lighting	1	....	1	....	1	....	....	....
Total	2	....	3	2	5	....	....	....
WHITEWATER, WALWORTH CO.—								
Empire Milling Co., Flour & Feed	2	1	4	....	4	....	....	....
Juill & Sheppard, Feed	1	....	6	....	6	....	....	....
Klinger Brewery Co., Brewery	6	1	4	....	4	....	1	39
Union Produce Co., Creamery	1	....	2	....	2	....	1	20
Wevher & Sons, Wagons & Carriages	6	....	28	....	28	....	1	10
Whitewater Elec. Lt. & Power Co., Lt., etc...	4	....	4	....	4	....	2	275
Whitewater Gazette, Printing	1	....	2	2	4	....	....	....
Whitewater Register, Printing	1	....	3	4	7	....	....	....
Whitewater Robe Tannery Co., Tannery	1	....	3	....	3	....	1	12
Whitewater Steam Laundry, Laundry	1	....	2	2	4	....	1	15
Wisconsin Dairy Supply Co., Dairy Machinery	6	....	10	1	11	....	1	10
Total	30	2	68	9	77	....	8	372
WINDSOR, DANE CO.—								
Bane's Tobacco Warehouse, Tob. Warehouse..	1	....	10	4	14	4	....	....
WOODBORO, ONEIDA CO.—								
Wood, Geo. E., Lumber Co., Lumber	6	....	100	....	100	3	6	600
WOODRUFF, VILAS CO.—								
C. & N. W. Ry., Pump Station	1	....	2	....	2	....	1	10
Winkler, Cash, Lumber	1	....	15	....	15	....	1	75
Total	2	....	17	....	17	....	2	85

ESTABLISHMENTS INSPECTED—SUMMARIES BY CITIES.

Number.	City and County.	No. of establishments.	Buildings. Under 3 stories.	Buildings. Three or more stories.	Employes. Male.	Employes. Female.	Employes. Total.	Employes. Under 16 yrs. of age.	Boilers. Number.	Boilers. Total horse power.	Other or no power.
1	Abbotsford, Clark Co.	2	12	....	44	3	47	....	4	180	....
2	Abrams, Oconto Co.	3	3	....	7	......	7	....	2	45	1
3	Algoma, Kewaunee Co.	5	21	2	245	70	315	38	7	655	1
4	Antigo, Langlade Co.	5	15	3	203	7	210	8	11	860	....
5	Appleton, Outagamie Co.	50	55	17	1496	572	2068	136	80	9563	23
6	Arbor Vitae, Vilas Co.	2	11	....	233	......	233	5	5	400	1
7	Ashland, Ashland Co.	35	160	7	1704	32	1736	21	79	8140	12
8	Athens, Marathon Co.	9	15	1	193	1	194	6	9	478	3
9	Bangor, La Crosse Co.	3	3	1	11	1	12	....	2	140	2
10	Baraboo, Sauk Co.	22	48	1	254	86	340	....	15	988	10
11	Barksdale, Bayfield Co.	1	54	....	75	......	75	....	3	375	....
12	Barron, Barron Co.	6	11	1	116	29	145	15	6	285	2
13	Bayfield, Bayfield Co.	6	16	....	220	......	220	2	14	1190	2
14	Beaver Dam, Dodge Co.	15	33	3	565	93	658	31	11	897	7
15	Beldenville, Pierce Co.	4	6	....	83	......	83	1	2	92	2
16	Beloit, Rock Co.	41	66	3	2855	258	3113	37	37	4086	25
17	Benton, La Fayette Co.	3	12	4	117	......	117	....	7	530	....
18	Blk. Riv. Falls, Jackson Co.	15	27	1	62	......	62	....	3	110	12
19	Boscobel, Grant Co.	11	17	3	61	78	139	....	7	286	5
20	Breed, Oconto Co.	1	1	....	10	......	10	....	1	60	....
21	Brodhead, Green Co.	7	7	1	14	6	20	1	1	20	6
22	Brokaw, Marathon Co.	1	11	....	192	8	200	....	....	......	1
23	Brooklyn, Green Co.	4	5	1	49	12	61	....	2	165	2
24	Bushman	1	1	....	2	......	2	....	1	14	....
25	Burlington, Racine Co.	11	36	5	135	120	255	2	19	1075	2
26	Cameron, Barron Co.	4	4	....	17	......	17	....	2	75	2
27	Carrollville, Milwaukee	2	20	3	168	29	197	5	13	2300	....
28	Cedarburg, Ozaukee Co.	4	9	3	155	48	203	32	7	350	....
29	Chilton, Calumet Co.	5	4	4	42	......	42	....	4	241	2
30	Chip'wa Falls, Chip'wa Co.	27	40	7	909	117	1026	11	20	1054	16
31	Clintonville, Waupaca Co.	5	8	....	40	......	40	....	5	245	1
32	Colfax, Dunn Co.	5	7	....	83	......	83	....	3	125	2
33	Columbus, Columbia Co.	9	17	7	70	28	98	....	9	665	4
34	Corliss, Racine Co.	1	8	....	200	......	200	....	2	300	....
35	Crandon, Forest Co.	6	12	....	465	......	465	2	10	610	....
36	Cudahy, Milwaukee Co.	4	25	8	1393	22	1415	38	21	3500	1
37	Darlington, Lafayette Co.	5	8	....	31	......	31	....	3	190	2
38	Delavan, Walworth Co.	11	19	1	49	55	104	1	9	395	4
39	De Pere, Brown Co.	15	34	5	452	315	767	21	8	900	11
40	Dodgeville, Iowa Co.	6	16	1	28	3	31	....	5	250	1
41	Dorchester, Clark Co.	2	3	1	33	......	33	....	4	195	....
42	Drummond, Bayfield Co.	1	7	1	200	......	200	....	7	1450	....
43	Eau Claire, Eau Claire Co.	58	135	16	2118	296	2414	103	55	5110	34
44	Edgerton, Rock Co.	28	36	2	618	574	1192	15	1	60	27
45	Elcho, Langlade Co.	1	3	....	35	......	35	....	3	150	....
46	Elkhorn, Walworth Co.	9	15	2	33	7	40	....	8	281	2
47	Elkmound, Dunn Co.	3	3	....	5	......	5	....	1	20	2
48	Ellsworth, Pierce Co.	11	13	1	43	2	45	....	4	260	7
49	Evansville, Rock Co.	10	14	....	233	103	336	....	9	680	6
50	Fifield, Price Co.	1	1	....	10	......	10	....	2	45	....
51	Fond du Lac, F. du Lac Co.	33	57	25	1069	307	1376	60	26	2860	17
52	Fort Atkinson, Jefferson Co.	15	65	10	475	95	570	....	17	911	3
53	Gile, Iron Co.	1	7	....	225	......	225	10	8	700	....
54	Gillett, Oconto Co.	7	13	....	45	1	46	5	4	137	3
55	Grafton, Ozaukee Co.	2	1	2	18	45	63	6	....	......	2

ESTABLISHMENTS INSPECTED—SUMMARIES BY CITIES.

Number.	Ciry and County.	No. of establishments.	Buildings		Employes.				Boilers.		
			Under 3 stories.	Three or more stories.	Male.	Female.	Total.	Under 16 yrs. of age.	Number.	Total horse power.	Other or no power.
56	Grand Rapids, Wood Co. ...	15	61	3	575	26	601	40	19	1912	7
57	Green Bay, Brown Co.	61	146	16	1988	297	2285	107	83	8714	18
58	Hartford, Washington Co. ..	16	34	6	128	32	160	2	13	609	5
59	Hayward, Sawyer Co.	5	7	....	263	2	265	....	13	1140	2
60	Hazelgreen, Grant Co.	4	7	3	80	......	80	....	3	100	2
61	Hazelhurst, Oneida Co.	1	9	....	190	......	190	6	5	700	....
62	Houghton, Bayfield Co.	2	6	....	65	......	65	....	3	140	....
63	Hudson, St. Croix Co.	18	35	5	573	28	601	1	15	1110	11
64	Hurley, Iron Co.	5	12	....	209	......	209	1	5	550	3
65	Iron River, Bayfield Co.	4	9	1	231	......	231	....	9	840	1
66	Irvington, Dunn Co.	1	5	....	75	......	75	16	3	140	....
67	Janesville, Rock Co.	68	115	27	1878	879	2757	56	46	3604	36
68	Jefferson, Jefferson Co.	26	71	12	368	37	405	3	23	1329	7
69	Jeffris, Oneida Co.	1	5	....	50	......	50	2	2	250	....
70	Johnson's Creek, Jeff'n Co...	4	8	1	23	......	23	....	4	100	1
71	Kaukauna, Outagamie Co...	13	60	6	438	141	579	12	17	1930	4
72	Kenosha, Kenosha Co.	33	190	17	3758	914	4672	322	68	6579	13
73	Kewaskum, Washington Co.	5	6	2	34	......	34	....	4	360	2
74	Kewaunee, Kewaunee Co. ..	12	32	2	171	66	237	50	9	550	4
75	Kilbourn City, Portage Co...	6	6	....	13	6	19	1	2	120	4
76	Lac du Flambeau, Vilas Co.	1	8	....	240	......	240	....	7	700	....
77	La Crosse, La Crosse Co....	100	242	53	3172	961	4133	112	99	8175	51
78	Lake Geneva, Walworth Co.	6	12	....	26	4	30	....	6	395	2
79	Lake Nebagamon, Doug. Co.	1	8	....	306	......	306	4	5	400	....
80	Lancaster, Grant Co.	5	10	1	18	......	18	....	3	280	3
81	Laona, Forest Co.	1	8	....	400	......	400	11	5	650	....
82	Lena, Oconto Co.	4	5	2	22	......	22	....	3	195	1
83	Lenox, Forest Co.	1	1	....	10	......	10	....	1	50	....
84	Madison, Dane Co.	49	146	15	1683	614	2297	66	38	3564	25
85	Manitowoc, Manitowoc Co...	47	151	23	1450	425	1875	52	58	4612	15
86	Marengo, Ashland Co.	1	2	....	30	......	30	6	2	50	....
87	Marinette, Marinette Co	11	56	1	1276	28	1304	42	56	4827	1
88	Marshfield, Wood Co.	19	52	3	604	16	620	51	26	1800	8
89	Mason, Bayfield Co.	1	7	....	213	2	215	5	9	900	....
90	Mauston, Juneau Co.	12	13	2	30	5	35	....	6	268	6
91	Mayville, Dodge Co.	17	46	6	191	27	218	....	20	1916	6
92	Medford, Taylor Co.	15	58	3	253	21	274	7	17	1713	6
93	Menasha, Winnebago Co.....	10	135	13	1302	113	1415	73	27	5205	2
94	Menomonie, Dunn Co.	23	55	4	664	2	666	18	20	1252	8
95	Mercer, Iron Co.	1	4	....	30	......	30	....	7	700	....
96	Merrill, Lincoln Co.	19	96	4	1484	18	1502	79	46	3560	7
97	Milwaukee, Milwaukee Co...	685	1257	527	45433	8723	54156	2991	747	80030	359
98	Mineral Point, Iowa Co......	7	38	4	217	2	219	....	9	795	2
99	Monroe, Green Co.	14	37	6	160	52	212	....	12	747	6
100	Nash, Bayfield Co.	1	3	....	60	......	60	....	1	30	....
101	Nashville, Forest Co.	1	2	....	50	......	50	....	2	100	....
102	Neenah, Winnebago Co.	17	74	11	517	177	694	5	26	3718	8
103	Neillsville, Clark Co.	14	28	4	104	9	113	7	11	447	5
104	Nekoosa, Wood Co.	1	11	2	354	12	366	2	....	......	1
105	New London, Waupaca Co...	16	48	9	439	23	462	15	20	1075	3
106	New Richm'd, St. Croix Co..	12	20	....	271	3	274	....	13	711	6
107	North Crandon, Forest Co...	1	1	....	20	......	20	....	2	100	....
108	North Milwaukee, Milw. Co.	6	16	1	535	7	542	10	9	649	1
109	Oconto, Oconto Co.	12	37	1	612	21	633	17	32	2295	3
110	Oconto Falls, Oconto Co. ...	4	26	....	242	9	251	14	10	1540	2

ESTABLISHMENTS INSPECTED—SUMMARIES BY CITIES.

Number.	City and County.	No. of establishments.	Buildings. Under 3 stories.	Buildings. Three or more stories.	Employes. Male.	Employes. Female.	Employes. Total.	Employes. Under 16 yrs. of age.	Boilers. Number.	Boilers. Total horse power.	Other or Lo power.
111	Odanah, Ashland Co.	1	9	....	300	......	300	7	6	700	....
112	Oregon, Dane Co.	4	4	....	33	15	48	....	....	......	4
113	Oshkosh, Winnebago Co.	90	340	35	4558	698	5256	221	93	10486	40
114	Park Falls, Price Co.	3	5	....	122	6	128	4	7	512	1
115	Peshtigo, Marinette Co.	6	14	2	244	1	245	....	11	1010	3
116	Phillips, Price Co.	2	16	....	440	......	440	6	10	1255	....
117	Platteville, Grant Co.	16	44	5	164	3	167	....	14	871	5
118	Plymouth, Sheboygan Co.	5	8	2	74	9	83	4	....	......	5
119	Portage, Columbia Co.	16	28	3	126	158	284	26	12	562	7
120	Port Edwards, Wood Co.	1	5	....	136	4	140	2	6	720	....
121	Pt. Washington, Ozaukee Co.	15	52	8	799	55	854	41	17	1389	6
122	Pr. du Chien, Crawford Co.	19	31	2	173	45	218	....	9	610	11
123	Pratt Jct., Oneida Co.	1	1	....	10	......	10	....	1	50	....
124	Racine, Racine Co.	88	159	63	6601	1232	7833	219	95	10095	39
125	Red Cliff, Bayfield Co.	1	2	....	125	......	125	....	3	300	....
126	Reedsburg, Sauk Co.	17	35	4	177	88	265	2	10	642	9
127	Rhinelander, Oneida Co.	20	54	1	1294	10	1304	30	42	2655	6
128	Rice Lake, Barron Co.	16	23	2	287	......	287	....	21	1353	6
129	Richland Center, Richl'd Co	13	26	1	89	6	95	1	9	552	7
130	Ripon, Fond du Lac Co.	10	19	4	115	143	258	7	6	264	4
131	River Falls, Pierce Co.	14	14	5	62	2	64	....	5	115	10
132	Rusk, Dunn Co.	3	5	....	13	......	13	....	2	60	1
133	Sanborn, Ashland Co.	2	2	....	12	......	12	....	2	72	....
134	Satult, Oneida Co.	1	2	....	25	......	25	....	3	200	....
135	Sawyer, Door Co.	1	6	....	100	50	150	....	3	240	....
136	Shawano, Shawano Co.	11	32	2	182	12	194	3	15	1675	5
137	Sheboygan, Sheboygan Co.	55	47	50	4817	691	5508	552	85	8570	16
138	Sheboygan Falls, Sheb'n Co.	5	3	3	219	43	262	4	7	625	....
139	Shell Lake, Washburn Co.	6	11	....	85	......	85	....	9	454	1
140	Solon Springs, Douglas Co.	1	2	....	8	......	8	....	1	60	....
141	So. Milwaukee, Milw. Co.	13	70	2	1542	5	1547	14	25	2400	3
142	So. Wayne, La Fayette Co.	1	1	....	1	......	1	....	1	15	....
143	Sparta, Monroe Co.	11	19	....	48	11	59	....	3	207	7
144	Spooner, Washburn Co.	1	1	....	10	......	10	....	1	40	....
145	Stanley, Chippewa Co.	6	24	....	428	......	428	4	22	1335	1
146	Star Lake, Vilas Co.	2	10	....	176	......	176	....	8	610	....
147	Stetsonville, Taylor Co.	1	2	....	30	......	30	....	2	120	....
148	Stevens Point, Portage	27	95	9	886	193	1079	31	35	2863	7
149	Stiles, Oconto Co.	1	24	....	135	......	135	....	8	590	....
150	Stoughton, Dane Co.	22	52	6	802	200	1002	30	6	625	19
151	Sturgeon Bay, Door Co.	9	23	1	250	50	300	40	9	840	4
152	Superior, Douglas Co.	68	134	15	4383	297	4680	109	88	8557	29
153	Suring, Oconto Co.	1	4	....	30	......	30	....	1	80	....
154	Thorp, Clark Co.	4	5	....	57	......	57	8	6	405	....
155	Tomah, Monroe Co.	12	32	....	237	2	239	....	16	845	4
156	Tomahawk, Lincoln Co.	15	39	....	377	5	382	2	22	2010	4
157	Tramway, Dunn Co.	1	5	....	50	......	50	....	2	120	....
158	Two Rivers, Manitowoc Co.	14	35	9	1371	243	1614	124	23	2275	5
159	Washburn, Bayfield Co.	12	24	....	740	6	746	3	47	5579	1
160	Watertown, Jefferson Co.	30	68	14	448	146	594	49	30	1616	12
161	Waukesha, Waukesha Co.	11	20	4	525	11	536	....	12	1015	3
162	Waupaca, Waupaca Co.	12	39	1	63	5	68	....	5	255	8
163	Waupun, Fond du Lac	14	26	1	454	95	549	....	13	882	6
164	Wausau, Marathon Co.	40	149	12	1825	50	1875	99	62	4503	11
165	Wauwatosa, Milwaukee Co.	9	53	2	177	......	177	....	8	440	3

ESTABLISHMENTS INSPECTED—SUMMARIES BY CITIES.

Number.	City and County.	No. of establishments.	Buildings.		Employes.				Boilers.		Other or no power.
			Under 3 stories.	Three or more stories.	Male.	Female.	Total.	Under 16 yrs. of age.	Number.	Total horse power.	
166	West Allis, Milwaukee Co.	7	43	4	2031	27	2058	21	14	2340	1
167	West Bend, Washington Co.	13	21	4	201	67	268	7	10	537	7
168	Westboro, Taylor Co.	3	6	....	138	......	138	....	8	650	1
169	West Salem, La Crosse Co.	2	2	....	3	2	5	....	....	......	2
170	Whitewater, Walworth Co.	11	30	2	68	9	77	....	8	372	4
171	Windsor, Dane Co.	1	1	....	10	4	14	4	....	......	1
172	Woodboro, Oneida Co.	1	6	....	100	......	100	3	6	600	....
173	Woodruff, Vilas Co.	2	2	....	17	......	17	....	2	85	....
	Total	3029	6854	1227	130739	21824	152563	6285	3316	307627	1253

In the 3,029 establishments visited by the inspectors and tabulated in the above tables, 158,848 laborers were employed. This is an average of over 51 to the establishment. Out of every 100 of these employes 4 were children under 16 years of age, 14 were females and 82 males over 16 years of age. Classified as to "children" and "adults," there were 6,285 of the former, which is 3.96 per cent. of the total, and 152,563 of the latter, which equals 96.04 per cent. of the whole.

	Number.	Per cent.
Number of male persons over 16 years	130,739	82.30
Number of female persons over 16 years	21,824	13.74
Number of children under 16 years	6,285	3.96
Total	158,848	100.00

	Number.	Per cent.
Number of persons over 16 years	152,563	96.04
Children under 16 years	6,285	3.96
Total	158,848	100.00

There were 8,081 buildings, or an average of 2.67 to each of the 3,029 establishments inspected. The average number of buildings to each establishment is larger outside Milwaukee than in Milwaukee. This is largely due to the fact that in the larger cities various branches of any industry are commonly placed under a single roof, while the opposite is true in the country districts.

NUMBER OF BUILDINGS INSPECTED AND AVERAGE TO EACH ESTABLISHMENT.

CLASSIFICATION.	BUILDINGS.		
	Average to each establishment.	Number.	Per cent.
Milwaukee	2.60	1,784	22.08
Outside Milwaukee	2.69	6,297	77.92
Total	2.67	8,081	100.00

In the following five tables, the number of "wooden," "brick," "iron or steel," "stone," and the "total" number of buildings occupied by the 3,029 establishments visited by the inspector, both in "Milwaukee" and "outside Milwaukee," are classified as to height. The number of wooden buildings found in Milwaukee varies from 1 seven stories high to 505 one story high, while the number outside Milwaukee varies from 1 six stories high to 2,269 one story high, and the total for the state ranges from 1 seven stories high to 2,774 one story high. The variation in the relative proportion of buildings, whether in "Milwaukee," "outside Milwaukee," or in the state at large, is but slight. That is, 67.42 per cent of the wooden buildings in Milwaukee are one story high, 64.84 per cent outside Milwaukee are one story high and in the state at large 65.3 per cent of the total are 1 story high. Nearly the same relations are maintained throughout the remaining six classes.

There were 967 brick buildings inspected in Milwaukee and 2,434 outside Milwaukee, making a total of 3,413 in the state. Nearly one-half the brick buildings in Milwaukee are three stories or over, while but little more than one-seventh of those outside Milwaukee are three or more stories high, and but one reaches the seven story mark. For the state as a whole, only one brick building out of every four is over two stories high.

The number of iron and steel buildings plus the number built of stone forms a very small per cent of the total number inspected. There are only 243 of the former and 177 of the latter. Nearly four-fifths of the iron or steel buildings are outside Milwaukee and nearly 87 per cent of these are under three stories high. All but 5 of the stone buildings are outside Milwaukee and about 80 per cent of these are two stories or less.

Of the total number of buildings inspected, 70.46 per cent of those in Milwaukee are under three stories high, while about 90 per cent of those outside Milwaukee, and 80 per cent of the total for the state are under three stories.

NUMBER OF WOODEN BUILDINGS.

CLASSIFICATION.	MILWAUKEE.		OUTSIDE MILWAUKEE.		TOTAL.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
One story	505	67.42	2,269	64.84	2,774	65.30
Two stories	204	27.24	982	28.06	1,186	27.92
Three stories	30	4.01	195	5.57	225	5.29
Four stories	6	.80	42	1.20	48	1.13
Five stories	2	.27	10	.03	12	.29
Six stories	1	.13	1	....	2	.06
Seven stories	1	.13	....	....	1	.02
Total	749	100.00	3,499	100.00	4,248	100.00

NUMBER OF BRICK BUILDINGS.

CLASSIFICATION.	MILWAUKEE.		OUTSIDE MILWAUKEE.		TOTAL.	
	Number.	Per cent.	Number	Per cent.	Number.	Per cent.
One story	281	28.70	1,392	57.19	1,673	49.02
Two stories	234	23.90	651	26.75	885	25.93
Three stories	182	18.59	291	11.95	473	13.86
Four stories	137	13.99	78	3.20	215	6.30
Five stories	72	7.36	19	.78	91	2.67
Six stories	44	4.49	2	.09	46	1.35
Seven stories	21	2.15	1	.04	22	.64
Eight stories	7	.72	....	....	7	.20
Nine stories	1	.10	....	....	1	.03
Total	979	100.00	2,434	100.00	3,413	100.00

NUMBER OF IRON AND STEEL BUILDINGS.

Classification.	Milwaukee.		Outside Milwaukee.		Total.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
One story	22	43.14	135	70.31	157	64.61
Two stories	7	13.73	31	16.15	38	15.64
Three stories	5	9.80	9	4.69	14	5.76
Four stories	12	23.53	3	1.56	15	6.17
Five stories	2	3.92	4	2.08	6	2.47
Six stories	2	3.92	4	2.08	6	2.47
Seven stories	1	1.96	1	.52	2	.82
Eight stories	....	....	2	1.05	2	.82
Nine stories	....	....	3	1.56	3	1.24
Total	51	100.00	192	100.00	243	100.00

NUMBER OF STONE BUILDINGS.

Classification.	Milwaukee.		Outside Milwaukee.		Total.	
	Number	Per cent.	Number	Per cent.	Number.	Per cent.
One story	3	60.00	90	52.32	93	52.54
Two stories	1	20.00	47	27.33	48	27.12
Three stories	1	20.00	26	15.12	27	15.25
Four stories	....	....	7	4.07	7	3.96
Five stories	....	....	2	1.16	2	1.13
Total	5	100.00	172	100.00	177	100.00

TOTAL NUMBER OF BUILDINGS.

Classification.	Milwaukee.		Outside Milwaukee.		Total.	
	Number.	Per cent	Number.	Per cent.	Number.	Per cent.
One story	811	45.46	3,886	61.71	4,697	58.12
Two stories	446	25.00	1,711	27.18	2,157	26.69
Three stories	218	12.22	521	8.27	739	9.14
Four stories	155	8.69	130	2.06	285	3.53
Five stories	76	4.26	35	.56	111	1.38
Six stories	47	2.63	7	.11	54	.67
Seven stories	23	1.29	2	.03	25	.31
Eight stories	7	.39	2	.03	9	.11
Nine stories	1	.06	3	.05	4	.05
Total	1,784	100.00	6,297	100.00	8,081	100.00

In the following table the buildings are classified as to whether they are wood, brick, iron or steel, or stone. 41.98 per cent of the buildings in Milwaukee are frame or wood, 54.88 per cent brick, and but little over 3 per cent are iron or steel, and stone. Of the buildings outside Milwaukee, 55.57 per cent are wood, 38.65 per cent brick, and less than 6 per cent iron or steel, and stone. In the total for the state, over one-half are wood, 42.23 per cent are brick, and but little over 5 per cent are iron or steel, and stone.

CLASSIFICATION AS TO KIND OF BUILDING.

CLASSIFICATION.	MILWAUKEE.		OUTSIDE MILWAUKEE		TOTAL.	
	Number	Per cent.	Number.	Per cent.	Number.	Per cent.
Frame, wood	749	41.98	3,499	55.57	4,248	52.57
Brick	979	54.88	2,434	38.65	3,413	42.23
Iron or steel	51	2.86	192	3.05	243	3.01
Stone	5	.28	172	2.73	177	2.19
Total	1,784	100.00	6,297	100.00	8,081	100.00

The following table exhibits the proportion of the various kinds of buildings in Milwaukee and outside Milwaukee to the total. Only 17.63 per cent of the wood or frame buildings, 28.67 per cent of the brick, 20.99 per cent of iron or steel, 2.82 per cent of the stone, and 22.08 per cent of the total number of buildings are located in Milwaukee. This means that the relative proportion of brick buildings is greater in Milwaukee than any other class, while just the opposite is true with the stone buildings.

RESPECTIVE PROPORTION OF THE DIFFERENT KINDS OF BUILDINGS IN MILWAUKEE AND STATE OUTSIDE.

CLASSIFICATION.	NUMBER OF BUILDINGS.			PER CENT.		
	Milwaukee.	Outside.	State.	Milwaukee.	Outside.	State.
Frame, wood	749	3,499	4,248	17.63	83.37	100.00
Brick	979	2,434	3,413	28.67	71.32	100.00
Iron or steel	51	192	243	20.99	79.01	100.00
Stone	5	172	177	2.82	97.18	100.00
Total	1,784	6,297	8,081	22.08	77.92	100.00

RESPECTIVE PROPORTION OF BUILDINGS IN MILWAUKEE AND OUTSIDE THAT CITY WHEN CLASSIFIED AS TO HEIGHT.

CLASSIFICATION.	NUMBER OF BUILDINGS.			PER CENT.		
	Milwaukee.	Outside	Total.	Milwaukee.	Outside.	Total.
One story	811	3,886	4,697	17.27	82.73	100.00
Two stories	446	1,711	2,157	20.68	79.32	100.00
Three stories	218	521	739	29.49	70.51	100.00
Four stories	155	130	285	54.39	45.71	100.00
Five stories	76	35	111	68.47	31.53	100.00
Six stories	47	7	54	87.08	12.92	100.00
Seven stories	23	2	25	91.30	8.70	100.00
Eight stories	7	2	9	77.78	22.22	100.00
Nine stories	1	3	4	25.00	75.00	100.00
Total	1,784	6,297	8,081	22.08	77.92	100.00

The above table shows that the greatest portion of the four, five, six, seven and eight story buildings are found in Milwaukee, while the greatest number of one, two, three and nine story buildings are outside Milwaukee, the former ranging from 54.39 per cent to 91.3 per cent, the latter from 70.51 per cent to 82.73 per cent.

The following table shows that out of a total of 130,739 males employed in the 3,029 establishments, 85,306, or 65.25 per cent are employed outside Milwaukee, and out of a total of 21,824 females, 13,101, or 60.03 per cent, are also employed outside Milwaukee. This means that out of a total of 152,563 employes, 98,407 or 64.5 per cent are employed in the establishments outside Milwaukee.

NUMBER OF PERSONS OVER 16 YEARS EMPLOYED.

CLASSIFICATION.	MALE.		FEMALE.		TOTAL.	
	Number.	Per cent.	Number.	Per cent.	Number	Per cent.
In Milwaukee	45,433	34.75	8,723	39.97	54,156	35.50
Outside Milwaukee	85,306	65.25	13,101	60.03	98,407	64.50
Total	130,739	100.00	21,824	100.00	152,563	100.00

The following table shows that out of a total of 54,156 employes in Milwaukee, 45,433 or 83.89 per cent are males, and 8,723 or 16.11 per cent are females, and of a total of

98,407 employes working outside Milwaukee, 85,306 or 86.69 per cent are males, and 13,101 or 13.31 per cent are females, while for the state as a whole, 85.7 per cent of the employes are males, and 14.3 per cent are females. Further than this, the table shows that a greater portion of the employes in Milwaukee are females than those outside, or in the state at large.

CLASSIFICATION AS TO SEX OF PERSONS OVER 16 YEARS OF AGE.

MILWAUKEE.	PER CENT.			NUMBER.		
	Male.	Female	Total.	Male.	Female.	Total.
Milwaukee	45,433	8,723	54,156	83.89	16.11	100.00
Outside Milwaukee	85,306	13,101	98,407	86.69	13.31	100.00
Total	130,739	21,824	152,563	85.70	14.30	100.00

NUMBER OF CHILDREN UNDER 16 YEARS.

CLASSIFICATION.	BETWEEN 14-16 YEARS.		BETWEEN 12-14 YEARS.		TOTAL.	
	Number	Per cent.	Number.	Per cent.	Number.	Per cent.
Milwaukee	2,962	48.40	29	17.58	2,991	47.59
Outside Milwaukee	3,158	51.60	136	82.42	3,294	52.41
Total	6,120	100.00	165	100.00	6,285	100.00

During the past 18 months, the inspectors found 6,285 children under 16 employed in the factories and other mechanical establishments of the state. Of this number, only 165 were under 14 years of age. The number of children employed are nearly equally divided between the city of Milwaukee and the territory outside, 47.59 per cent being employed in Milwaukee and 52.41 per cent outside.

NUMBER OF ESTABLISHMENTS PAYING WAGES WEEKLY, MONTHLY, ETC.

CLASSIFICATION.	MILWAUKEE.		OUTSIDE MILWAUKEE.		TOTAL.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
Weekly	519	75.76	1,060	45.22	1,579	52.13
Semi-Monthly	114	16.64	383	16.34	497	16.41
Monthly	41	5.99	654	27.90	695	22.94
Not reporting	11	1.61	247	10.54	258	8.52
Total	685	100.00	2,344	100.00	3,029	100.00

As shown above, 519 establishments or 75.76 per cent of the total number in Milwaukee pay wages weekly, 114 or 16.64 per cent semi-weekly, and 41 or 5.99 per cent, monthly, the remaining 11 not reporting as to time of paying wages. Of the 2,344 establishments outside, 1,060 or 45.22 per cent pay wages weekly, 383 or 16.34 semi-monthly, and 654 or 27.9 per cent, monthly, while the remaining 247 made no report.

NUMBER OF PERSONS RECEIVING THEIR WAGES WEEKLY, MONTHLY, ETC.

CLASSIFICATION.	MILWAUKEE.		OUTSIDE MILWAUKEE.		TOTAL.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
Weekly	30,284	55.92	26,843	27.28	57,127	37.44
Semi-monthly	18,362	33.91	31,112	31.62	49,474	32.43
Monthly	4,337	8.01	34,821	35.38	39,158	25.67
Not reporting	1,173	3.16	5,631	5.72	6,804	4.46
Total	54,156	100.00	98,407	100.00	152,563	100.00

The time of paying wages affected the employes found in the various establishments as shown in the above table. Over one-half the employes in Milwaukee are paid weekly, a little over one-third semi-monthly, and less than one-tenth monthly, while outside Milwaukee but little over one- fourth the employes are paid weekly, less than one-third smi-monthly, and but little more than one-third monthly.

NUMBER AND PER CENT. OF ESTABLISHMENTS REPORTING AS TO WHETHER THEY PAID WAGES IN CASH OR CHECKS.

CLASSIFICATION.	MILWAUKEE.		OUTSIDE MILWAUKEE.		TOTAL.	
	Number	Per cent.	Number.	Per cent.	Number.	Per cent.
Cash	501	73.14	1,647	70.26	2,148	70.91
Checks	119	17.37	605	25.81	724	23.91
Both	2	.29	31	1.33	33	1.09
Not reporting	63	9.20	61	2.60	124	4.09
Total	685	100.00	2,344	100.00	3,029	100.00

The above table is an exhibit of the establishments classified as to whether they pay employes in cash, checks, or both. In

Milwaukee 501 establishments or 73.14 per cent pay cash and less than one-fifth pay in checks, while 1,647 or 70.26 per cent of those outside Milwaukee pay cash, and about one-fourth pay in checks.

PERSONS EMPLOYED CLASSIFIED AS TO WHETHER THEY ARE PAID CASH OR CHECKS.

CLASSIFICATION.	MILWAUKEE.		OUTSIDE MILWAUKEE.		Total.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
Cash	35,271	65.13	59,144	60.11	94,415	61.89
Checks	17,541	32.39	37,131	37.72	54,672	35.84
Both	106	.20	170	.17	276	.18
Not reporting	1,238	2.28	1,962	2.00	3,200	2.09
Total	54,156	100.00	98,407	100.00	152,563	100.00

The above exhibit classifies the employes as to whether they are paid in cash, checks, or both. The percentage of employes receiving cash is not as large as the percentage of establishments paying cash, either in Milwaukee or outside. This is explained by the fact that the larger establishments pay in checks, and a greater number of employes are affected. Out of a total of 54,156 employes in Milwaukee, 35,271 or 65.13 per cent receive cash, and 17,541 or 32.39 per cent are paid in checks, while out of the 98,407 employes outside Milwaukee, 59,144 or 60.11 per cent are paid in cash, and 37,131 or 37.72 per cent in checks.

CLASSIFICATION OF ESTABLISHMENTS AS TO HOURS OF LABOR DAILY.

CLASSIFICATION.	MILWAUKEE.		OUTSIDE MILWAUKEE.		Total.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
8 hours or less	52	7.58	82	3.50	134	4.42
9 hours	145	21.17	154	6.57	299	9.87
10 hours	436	63.65	1,723	73.51	2,159	71.28
11 hours	3	.44	42	1.79	45	1.49
12 hours	5	.73	104	4.44	109	3.60
Irregular	44	6.43	239	10.19	283	9.34
Total	685	100.00	2,344	100.00	3,029	100.00

Of the 685 establishments in Milwaukee, 436 or 63.65 per cent require 10 hours for a day's work, 145 or 21.17 per cent require 9 hours, and 52 or 7.58 per cent 8 hours, while out of the 2,344 establishments outside Milwaukee, 1,723 or 73.51 per cent require 10 hours per day, 154 or 6.57 per cent 9 hours per day, etc.

As shown in the following table, over one-fifth of the employes in Milwaukee work eight and nine hours a day, while outside Miwaukee less than 1 employe out of 33 work eight and nine hours. On the other hand, about 90 out of every 100 employes outside Milwaukee work ten and eleven hours per day, while only about 70 out of 100 in Milwaukee work ten and eleven hours. The probable explanation of this is that the skill of employes, the improved machinery, and other facilities, enable the manufacturers of Milwaukee to accomplish more in less time than those outside Milwaukee.

EMPLOYES CLASSIFIED AS TO HOURS OF LABOR PER DAY.

CLASSIFICATION.	MILWAUKEE.		OUTSIDE MILWAUKEE.		TOTAL.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
8 hours	5,223	9.64	415	.42	5,638	3.70
9 hours	5,718	10.56	2,410	2.45	8,128	5.33
10 hours	37,909	70.00	83,428	84.78	121,337	79.53
11 hours	211	.39	4,102	4.17	4,313	2.83
12 hours	5,032	9.29	6,623	6.73	11,655	7.64
Irregular	63	.12	1,429	1.45	1,492	.97
Total	54,156	100.00	98,407	100.00	152,563	100.00

TOTAL NUMBER OF BOILERS, NUMBER INSURED, NUMBER INSPECTED THOUGH NOT INSURED, AND NUMBER NOT INSPECTED.

CLASSIFICATION.	MILWAUKEE.		OUTSIDE MILWAUKEE.		TOTAL.	
	Number	Per cent.	Number	Per cent.	Number.	Per cent.
Insured	545	72.96	1,631	63.49	2,176	65.62
Inspected but not insured	15	2.01	247	9.61	262	7.90
Not inspected	187	25.03	691	26.90	878	26.48
Total	747	100.00	2,569	100.00	3,316	100.00

Of the 747 boilers in Milwaukee, 545 or 72.96 per cent are insured, 15 or 2.01 per cent inspected but not insured, and 187 or 25.03 per cent were not inspected, while of the

2,569 boilers outside Milwaukee, 1,631 or 63.49 per cent are insured, 247 or 9.61 per cent were inspected but not insured, and 26.9 per cent were not inspected.

BOILERS INSPECTED AND NOT INSPECTED.

CLASSIFICATION.	MILWAUKEE.		OUTSIDE MILWAUKEE.		TOTAL.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
Inspected	560	74.97	1,878	73.10	2,438	73.52
Not inspected	187	25.03	691	26.90	878	26.48
Total	747	100.00	2,569	100.00	3,316	100.00

HORSE POWER.

CLASSIFICATION.	Number boilers.	Average power to each boiler.	HORSE POWER.	
			Number.	Per cent.
Milwaukee	747	107.1	80,030	26.02
Outside Milwaukee	2,569	88.6	227,597	73.98
Total	3,316	92.8	307,627	100.00

The total number of boilers in the establishments inspected are 3,316. Of this number, 747 are in Milwaukee, the remainder outside. The average horse power of the boilers in Milwaukee is 107.1, those outside 88.6, while the average for the state is 92.8. The total horse power of the 3,316 boilers is 307,627. Over one-fourth of this amount is in Milwaukee, and nearly three-fourths outside.

NUMBER OF ESTABLISHMENTS USING STEAM FOR POWER AND AVERAGE NUMBER OF BOILERS AND HORSE POWER TO EACH ESTABLISHMENT.

Classification.	Number of establishments using steam power.	Average number of boilers to each establishment.	Average number horse power to each establishment.
Milwaukee	328	2.28	244
Outside Milwaukee	1,448	1.71	157
Total	1,776	1.87	173

A total of 1,776 establishments inspected use steam. 328 of this number are in Milwaukee, the remainder outside. The average number of boilers to the establishment in Milwaukee is 2.28 and the average horse power is 244, while outside Milwaukee the average number of boilers to the establishment is 1.71 and the average horse power 157.

KIND OF POWER USED AND NUMBER OF PERSONS EMPLOYED.

CLASSIFICATION.	MILWAUKEE.		OUTSIDE MILWAUKEE.		TOTAL.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
Emp. where steam is used	46,033	85.00	88,566	90.00	134,599	88.22
Emp. where gas is used..	2,498	4.61	2,965	3.01	5,463	3.58
Emp. where electricity is used	2,987	5.52	3,181	3.23	6,168	4.04
Emp. where water is used	....	....	1,173	1.19	1,173	.77
Emp. where hand is used	216	.40	991	1.01	1,207	.79
Emp. where no power is used	2,422	4.47	1,531	1.56	3,953	2.60
Total	54,156	100.00	98,407	100.00	152,563	100.00

This table classifies the number of employes in Milwaukee and outside that city as to the kind of power used in the establishments where employed. Of the total number employed in Milwaukee, 85 per cent are employed where steam is used, a little over 10 per cent where other power is used, and less than 5 per cent where no power is used. In the state outside Milwaukee, 90 per cent are employed where steam is used, less than 9 per cent where other power is used, and about 1½ per cent where no power is used.

FIRE ESCAPES AND BALCONIES.

CLASSIFICATION.	FIRE ESCAPES.		BALCONIES ATTACHED	
	Number.	Per cent.	Number.	Per cent.
Milwaukee	573	57.41	461	58.50
Outside Milwaukee	425	42.59	327	41.50
Total	998	100.00	788	100.00

Of the 998 fire escapes used in the establishments inspected, 57.41 per cent are in Milwaukee, 42.59 per cent outside. Of the 788 balconies attached, 461 or 58.5 per cent are in Milwaukee, and 327 or 41.5 per cent, outside.

NUMBER OF BUILDINGS HAVING STANDPIPES, HOSE CONNECTIONS, AND AUTOMATIC SPRINKLERS.

CLASSIFICATION.	OUTSIDE.		INSIDE.		HOSE CONNECTIONS.		AUTOMATIC SPRINKLERS.	
	No.	Per ct.	No.	Per ct.	No.	Per ct	No.	Per ct.
Milwaukee	372	54.54	176	14.59	281	21.80	146	25.48
Outside Milwaukee ..	310	45.46	1,030	85.41	1,008	78.20	427	74.52
Total	682	100.00	1,206	100.00	1,289	100.00	573	100.00

Of the total number of buildings visited by the inspector, 1,888 had standpipes, 682 being outside, the remainder inside. Of the number inside, 372 or 54.54 per cent are in Milwaukee, the remaining 310 outside Milwaukee. Of the 1,206 buildings having inside standpipes, 1,030 or 85.41 per cent are outside Milwaukee. There are 1,289 buildings having hose connections and 573 automatic sprinklers. 78.2 per cent of the former, and 74.52 per cent of the latter, are outside Milwaukee.

In addition to the number of buildings having standpipes, automatic sprinklers, etc., the following table presents the number of such standpipes, hydrants, and sprinklers. In the establishments inspected, there are 935 outside standpipes which are about evenly divided between Milwaukee and the state outside, while 85.54 per cent of the 1,902 inside standpipes, and about the same percentage of the hydrants, are outside Milwaukee.

NUMBER STANDPIPES, HYDRANTS, ETC.

CLASSIFICATION.	OUTSIDE		INSIDE.		HYDRANTS.		AUTOMATIC SPRINKLERS.	
	No	Per ct.	No.	Per ct.	No.	Per ct.	No.	Per ct.
Milwaukee	474	50.70	275	14.46	12	15.58	7	25.00
Outside Milwaukee...	461	49.30	1,627	85.54	65	84.42	21	75.00
Total	935	100.00	1,902	100.00	77	100.00	28	100.00

NUMBER OF STAIRWAYS AND OTHER MEANS OF GETTING DOWN FROM STORIES ABOVE GROUND FLOOR.

CLASSIFICATION.	MILWAUKEE.		OUTSIDE MILWAUKEE.		TOTAL.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
Inside stairways	1,371	82.10	2,792	73.63	4,163	76.22
Outside stairways	216	12.93	736	19.41	952	17.43
Tramways	67	4.01	91	2.40	158	2.89
Other means	16	.96	173	4.56	189	3.46
Total	1,670	100.00	3,792	100.00	5,462	100.00

Stairways and tramways as fire escapes come within the inspection laws. The inspectors examined 5,462 of these. Of this number, 1,670 were in Milwaukee and 3,792 outside. Of the number inspected in Milwaukee, over 82 per cent are inside stairways, about 13 per cent outside stairways, 4 per cent tramways, and less than 1 per cent other means of escape. Out of the 3,792 inspected outside Milwaukee, 73.63 per cent were inside stairways, 19.41 per cent outside 2.4 per cent were tramways and 4.56 per cent other means.

NUMBER OF BUILDINGS HAVING ELEVATORS, AND NUMBER OF ELEVATORS USED.

CLASSIFICATION.	BUILDINGS.		ELEVATORS.	
	Number.	Per cent.	Number.	Per cent.
Classification	476	43.79	592	48.05
Outside Milwawukee	611	56.21	640	51.95
Total	1,087	100.00	1,232	100.00

KIND OF DOORS USED ON ELEVATORS.

CLASSIFICATION.	MILWAUKEE.		OUTSIDE MILWAUKEE.		TOTAL.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
Automatic doors	107	18.08	165	25.78	272	22.08
Bars	193	32.60	217	33.91	410	33.28
Lift gates	127	21.45	108	16.87	235	19.07
Swing doors	44	7.43	65	10.16	109	8.85
Sliding doors	121	20.44	85	13.28	206	16.72
Total	592	100.00	640	100.00	1,232	100.00

NUMBER OF HOISTS.

CLASSIFICATION.	HOISTS.	
	Number.	Per cent.
Milwaukee	361	60.37
Outside Milwaukee	237	39.63
Total	598	100.00

Elevators and hoists also come within the inspection laws. There were 1,087 buildings inspected having 1,232 elevators. Of the number of buildings having elevators, 56.21 per cent are outside Milwaukee, and these buildings contain 51.95 per cent of the elevators. In nearly one-third of the elvators, bars were used as doors, about one-fifth automatic doors, less than one-fifth lift gates, about one-twelfth swing doors, and one-sixth sliding doors.

The inspector found a total of 598 hoists, 60.37 per cent of which are in Milwaukee.

NUMBER OF BUILDINGS HAVING COMMUNICATIONS BETWEEN WORK ROOMS AND ENGINE OR POWER ROOM.

CLASSIFICATION.	COMMUNICATION.		NO COMMUNICATION.		TOTAL.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent
Milwaukee	347	29.60	1,392	32.09	1,739	33.38
Outside Milwaukee	825	70.40	2,946	67.91	3,771	66.62
Total	1,172	100.00	4,338	100.00	5,510	100.00

Of the 5,510 buildings containing steam boilers, 1,172 have communication between work rooms and engine room, while 4,338 have none. 70.40 per cent of the former, and 67.91 per cent of the latter are outside Milwaukee.

KIND OF COMMUNICATION.

CLASSIFICATION.	MILWAUKEE.		OUTSIDE MILWAUKEE.		TOTAL.	
	Number.	Per cent.	Number.	Per cent.	Number	Per cent.
Electric Bells	228	65.71	301	36.49	529	45.14
'Phones	49	14.12	40	4.85	89	7.59
Speaking Tubes	12	3.46	53	6.42	65	5.55
Whistles	58	16.71	431	52.24	489	41.72
Total	347	100.00	825	100.00	1,172	100.00

The buildings having communications between work room and engineers, classified as to kind, show that 65.71 per cent of those in Milwaukee, and 36.49 per cent of those outside, have electric bells, 14.12 per cent of those in Milwaukee and 4.85 of those outside have 'phones, 3.46 of those in Milwaukee and 6.42 outside, speaking tubes, and the remainder, whistles. This means that less than 25 per cent of the buildings have communications between work rooms and engineer, as required by law.

NUMBER OF EMERY AND POLISHING WHEELS AND NUMBER OF SUCH WHEELS HAVING SUCTION DEVICES AND GUARDS.

CLASSIFICATION.	TOTAL WHEELS.		SUCTION DEVICES.		GUARDS.	
	Number	Per cent.	Number.	Per cent.	Number.	Per cent.
Milwaukee	1,087	32.52	218	31.64	146	24.05
Outside Milwaukee	2,256	67.48	471	68.36	461	75.95
Total	3,343	100.00	689	100.00	607	100.00

The law requires that emery and polising wheels must be provided with guards and suction devices. The inspectors found that but little more than 20 per cent of these were provided with suction devices, and less than 20 per cent were provided with guards.

NUMBER OF VATS AND PANS AND NUMBER OF SUCH HAVING GUARDS

CLASSIFICATION.	VATS, PANS, ETC.		NOT GUARDED.	
	Number.	Per cent.	Number.	Per cent.
Milwaukee	579	7.81	423	15.42
Outside Milwaukee	6,849	92.19	2,321	84.58
Total	7,428	100.00	2,744	100.00

The factory laws also provide that vats and pans containing moulten metal or hot liquid must be guarded for the safety of employes. There were 7,428 of these inspected, 92.19 per cent of which are outside Milwaukee. Of the total number inspected, 2,744 were not properly guarded. But wherever guards were practicable, the law was enforced by the inspectors.

NUMBER OF DOORS AND EXITS FROM FIRST FLOOR AND BASEMENT.

Classification.	First Floor.		Basement.	
	Number.	Per cent.	Number.	Per cent.
Milwaukee	6,789	21.56	611	31.62
Outside Milwaukee	24,701	78.44	1,321	68.38
Total	31,490	100.00	1,932	100.00

HOW DOORS OPEN OR SWING.

Classification.	Milwaukee.		Outside Milwaukee.		Total.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
Doors swing in	3,361	45.42	14,312	55.00	17,673	52.88
Doors swing out	1,348	18.22	6,204	23.84	7,552	22.60
Doors swing both ways	48	.65	241	.93	289	.86
Doors sliding	2,235	30.20	5,030	19.33	7,265	21.74
Doors lifting	364	4.92	62	.24	426	1.27
Doors open	44	.59	173	.66	217	.65
Total	7,400	100.00	26,022	100.00	33,422	100.00

The law provides that all doors to exits should be so hung as to swing out, or both in and out, and the factory inspectors have endeavored to enforce this law wherever such enforcement was necessary for the safety of employes.

A total of 33,422 doors and exits were inspected, of which 1,932 were exits from basements and 31,490 from first floors. In Milwaukee, 3,361 or 45.42 per cent, and in the state outside, 14,312 or 55 per cent of the doors inspected, swing in. Taking the state as a whole, 17,673 or 52.88 per cent of the 33,422 doors inspected swing in. The remaining 15,749 or 47.12 per cent, either swing out, both in and out, lift, slide or are left open. Wherever necessary for the safety of employes, orders were issued for doors to swing out.

NUMBER OF BUILDINGS HAVING MECHANICAL VENTILATION, NUMBER AND CONDITION OF WATER CLOSETS.

CLASSIFICATION.	MECHANICAL VENTILATION.		CLOSETS.		CLOSETS IN BAD CONDITION.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
Milwaukee	301	29.39	3,284	42.96	194	56.07
Outside Milwaukee	723	70.61	4,361	57.04	152	43.93
Total	1,024	100.00	7,645	100.00	346	100.00

The above table is a summing up of the sanitary conditions of the various establishments inspected, which come within the scope of the law. In the state as a whole, 1,024 buildings had mechanical ventilating systems, and 7,645 had closets of which number 346 were in bad conditions. These closets were ordered to be placed in good condition, and wherever closets and mechanical ventilation were needed for the health and safety of employes, orders were so issued.

NUMBER OF BUILDINGS PROVIDED WITH SEATS FOR FEMALES.

CLASSIFICATION.	BUILDINGS.	
	Number.	Per cent.
Milwaukee	406	30.55
Outside Milwaukee	923	69.45
Total	1,329	100.00

A total of 1,329 buildings were provided with seats for females, according to law. Of this number, 69.45 per cent are outside Milwaukee. Wherever female labor was employed and seats were not properly provided, orders were issued to so provide.

NUMBER OF ESTABLISHMENTS IN WHICH ACCIDENTS RESULTING IN INJURY TO EMPLOYES OCCURRED AND THE NUMBER OF SUCH ACCIDENTS.

CLASSIFICATION.	ESTABLISHMENTS.		ACCIDENTS.	
	Number.	Per cent.	Number.	Per cent.
Milwaukee	16	8.04	173	13.46
Outside Milwaukee	183	91.96	1,112	86.44
Total	199	100.00	1,285	100.00

CLASSIFICATION OF ACCIDENTS.

CLASSIFICATION.	MILWAUKEE.		OUTSIDE MILWAUKEE.		TOTAL.	
	Number.	Per cent.	Number.	Per cent.	Number	Per cent.
Fatal	7	3.95	12	1.15	19	1.56
Temporary injury	148	83.62	1,008	96,83	1,156	94.91
Permanent injury	22	1,243	21	2.02	43	3.53
Total	177	100.00	1,041	100.00	1,218	100.00

The number of accidents reported is much less than in the preceding report. Of the 3,029 establishments inspected, accidents were reported in only 199. In this number of establishments, 1,285 accidents occurred. Of the 199 establishments where accidents occurred, 183 or 91.96 per cent are outside Milwaukee, and 86.44 per cent of the accidents also occurred outside Milwaukee. Among the accidents proving fatal, 7 occurred in Milwaukee and 12 outside. Of those resulting in temporary injury, 148 occurred in Milwaukee and 1,008 outside, and of those resulting in permanent injury, 22 occurred in Milwaukee and 21 outside.

NUMBER OF ENGINEERS AND AVERAGE YEARS OF EXPERIENCE AND TIME IN PRESENT SERVICE.

	Number.
Engineers included	1,065
Average number of years' experience	13
Average number of years in present service	6

This table presents the number of engineers employed in establishments where steam is used, the average number of years' experience of each, and the average number of years in the present service.

CIGAR FACTORIES.

There was a total of 408 cigar factories inspected by the factory inspectors. Of this number 16 were located in basements of buildings, 258 occupied first floors, 108, second floors, 18, third floors, 2, fourth floors, and 6 occupied entire buildings. The 16 establishments located in basements were ordered closed by the inspectors. Six establishments worked their employes six hours per day, 319, eight hours, 31, nine hours, and 52, ten hours. The inspectors found a total of 2,778 persons employed in these establishments. Of this number, 1,858 were males over 18 years of age, 551, females over 18, and 269 were persons under 18. Of this latter number, 198 were persons between 16 and 18, 163 between 14 and 16, and 8 were under 14.

PERMITS.

The work of the factory inspectors in granting permits to children to work in factories, workshops, etc., is presented in detail in the following seven tables. The first in the series classifies both male and female children as to whether they received "regular" or "vacation" permits. The regular permits are granted to children between 14 and 16 years of age, and entitled them to be employed in any factory, workshop, bowling alley and the various other places enumerated in the "child labor law," while the vacation permits are given only to children between 12 and 14, and entitles them to work during school vacation in any store, merchantile establishment, laundry, office, hotel, telephone, telegraph or public messenger service in the town or city where such child resides; but in no case shall vacation permits entitle the holder to work in or about any mine, factory, workshop, bowling alley, beer garden or bar room.

The total number of regular permits granted by the inspectors from June 1st, 1903, to August 1st, 1904, was 9,852. Of this number, 5,632 were to males and 4,220 to females. The total number of vacation permits granted was 1,049, of which 723 were to males and 326 to femlaes, making a total of 10,901 permits granted to children to work. It must not be understood that this number found work. But even if they all found work it does not follow that there are 10,901 children employed at gainful occupations in Wisconsin. It is the policy of the inspectors to grant permits for not to exceed one year to any child and then they must be renewed. Often times they are granted for less than a year and must be renewed if the child continues to work, unless it has in the meantime become 16 years of age. Then, again, all the permits granted for a year in June or July, 1903, would expire before August 1st, 1904, and must be renewed unless the holder in the meantime passed beyond the age of 16. So no importance must be attached to these tables as showing the number of children employed, but only the number of permits issued by the factory inspectors.

The second table shows with whom the children receiving permits reside. Of the total number receiving permits 9,716 or 89.13 per cent reside with "parents," 147 or 1.36 per cent with the "father," 787 or 7.22 per cent with the "mother," 139 or 1.28 per cent with the "guardian," and the remainder elsewhere. This table means that 9 children out of every 10 have both parents living who ought, in most cases, to be able to support them, and the chief support of one out of every 14 is the mother.

The third table is important as showing the number of years children asking for permits have previously attended public school exclusively. About one-third attended school seven years, nearly one-third attended eight years, about 3 out of every 40 attended nine or ten years, while attendance of the remainder varied from one to six years.

The fourth table is important as showing the number of years children asking for permits have attended parochial schools exclusively, and affords comparison between the school period of the parochial and public school children. Less than 20 per cent of the exclusively parochial school children applying for permits have attended school more than seven years, while

37.17 per cent of those having attended public school exclusively have attended more than seven years.

The fifth table below shows the number of children applying for permits who have attended both public and parochial school, and the results obtained do not materially vary from those found in table four. The sixth table is a recapitulation of the preceeding three. The summary following these tables shows in condensed form the number of "regular" and "vacation" permits granted to children who had previously attended "public" or "parochial" school or "both" or "neither." The table shows that a larger percentage of the children asking for permits are parochial school children than any other class. This becomes all the more significant when it is learned from the report of the State Supt. of Public Instruction for 1902–1903 that only about one-fourth the children of school age in Wisconsin are parochial school children.

TABLE SHOWING NUMBER OF MALES AND FEMALES RECEIVING PERMITS CLASSIFIED AS TO WHETHER THEY RECEIVED "REGULAR" OR "VACATION" PERMITS.

CLASSIFICATION.	MALES.		FEMALES.		TOTAL.	
	Number	Per cent	Number.	Per cent.	Number	Per cent.
Regular permits	5,632	88.62	4,220	92.83	98.52	90.38
Vacation permits	723	11.38	326	7.17	1,049	9.62
Total	6,355	100.00	4,546	100.00	10,901	100.00

TABLE CLASSIFYING CHILDREN RECEIVING "REGULAR" OR "VACATION" PERMITS AS TO WHETHER THEY RESIDE WITH "PARENTS," "FATHER," "MOTHER," "GUARDIAN," ETC.

WITH WHOM RESIDENT.	REGULAR.		VACATION.		TOTAL.	
	Number.	Per cent.	Number	Per cent.	Number.	Per cent.
Parents	8,832	89.65	884	84.27	9,716	89.13
Father	136	1.38	12	1.14	148	1.36
Mother	652	6.62	135	12.87	787	7.22
Guardian	129	1.31	10	.96	139	1.28
Neither	103	1.04	8	.76	111	1.01
Total	9,852	100.00	1,049	100.00	10,901	100.00

TABLE SHOWING NUMBER OF CHILDREN RECEIVING "REGULAR" OR "VACATION" PERMITS CLASSIFIED AS TO NUMBER OF YEARS PREVIOUS PUBLIC SCHOOL ATTENDANCE.

School Attendance.	Regular.		Vacation.		Total.	
	Number.	Per cent.	Number	Per cent.	Number.	Per cent.
One year	11	.26	....	....	11	.24
Two years	20	.48	3	.61	23	.49
Three years	55	1.32	10	2.03	65	1.40
Four years	145	3.48	32	6.50	177	3.80
Five years	299	7.18	52	10.57	351	7.54
Six years	623	14.96	108	21.95	731	15.70
Seven years	1,369	32.88	198	40.25	1,567	33.66
Eight years	1,293	31.05	83	16.87	1,376	29.55
Nine years	299	7.18	6	1.22	305	6.55
Ten years	50	1.21	....	....	50	1.07
Total	4,164	100.00	492	100.00	4,656	100.00

TABLE SHOWING NUMBER OF CHILDREN RECEIVING "REGULAR" OR "VACATION" PERMITS CLASSIFIED AS TO NUMBER OF YEARS PREVIOUS PAROCHIAL SCHOOL ATTENDANCE.

School Attendance.	Regular.		Vacation.		Total.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
One year	9	.20	....	....	9	.19
Two years	44	1.00	2	.61	46	.97
Three years	113	2.57	3	.91	116	2.46
Four years	260	5.91	22	6.69	282	5.97
Five years	477	10.85	37	11.25	514	10.88
Six years	959	21.84	83	25.23	1,042	22.06
Seven years	1,640	37.32	135	41.03	1,775	37.57
Eight years	773	17.58	46	13.98	819	17.34
Nine years	112	2.55	1	.30	113	2.39
Ten years	8	.18	....	....	8	.17
Total	4,395	100.00	329	100.00	4,724	100.00

TABLE SHOWING NUMBER OF CHILDREN RECEIVING "REGULAR" OR "VACATION" PERMITS CLASSIFIED AS TO NUMBER OF YEARS THEY HAD PREVIOUSLY ATTENDED BOTH PUBLIC AND PAROCHIAL SCHOOLS.

School Attendance.	Regular.		Vacation.		Total.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
One year	2	.15	....	....	2	.14
Two years	6	.44	....	....	6	.41
Three years	16	1.16	1	1.22	17	1.17
Four years	48	3.49	3	3.66	51	3.50
Five years	109	7.92	8	9.76	117	8.02
Six years	232	16.86	15	18.29	247	16.94
Seven years	509	36.99	43	52.44	552	37.86
Eight years	385	27.98	11	13.41	396	27.16
Nine years	63	4.57	1	1.22	64	4.39
Ten years	6	.44	....	....	6	.41
Total	1,376	100.00	82	100.00	1,458	100.00

TABLE SHOWING TOTAL NUMBER OF CHILDREN RECEIVING "REGULAR" AND "VACATION" PERMITS CLASSIFIED AS TO THE NUMBER OF YEARS PREVIOUS SCHOOL ATTENDANCE.

SCHOOL ATTENDANCE.	REGULAR.		VACATION.		TOTAL.	
	Number.	Per cent	Number.	Per cent	Number.	Per cent.
One year	22	.22	....	....	22	.20
Two years	70	.70	5	.55	75	.69
Three years	184	1.85	14	1.55	198	1.83
Four years	453	4.56	57	6.32	510	4.70
Five years	885	8.91	97	10.74	982	9.06
Six years	1,814	18.26	206	22.81	2,020	18.64
Seven years	3,518	35.41	376	41.64	3,894	35.93
Eight years	2,451	24.68	140	15.50	2,591	23.91
Nine years	474	4.77	8	.89	482	4.45
Ten years	64	.64	....	....	64	.59
Total	9,935	100.00	903	100.00	10,838	100.00

SUMMARY.

NUMBER WHO ATTENDED.	REGULAR.		VACATION.		TOTAL.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
Public school	4,164	41.66	492	54.24	4,656	42.71
Parochial school	4,395	43.98	329	36.28	4,724	43.34
Both public and parochial	1,376	13.77	82	9.04	1,458	13.37
Neither	59	.59	4	.44	63	.58
Total	9,994	100.00	907	100.00	10,901	100.00

The following tables are complete summaries of the work of the factory inspectors, except that which is not capable of classification. Many of the inspections of factories and workshops are duplicate inspections made necessary by violations of the law. Over 93 per cent of the places inspected were factories and workshops, cigar factories, and garment making shops. The remainder, amounting to less than 7 per cent of the total, were inspections of beer gardens, mercantile establishments, offices, hotels, school houses, etc.

The second table below is a classification of orders issued by inspectors. Of a total of 10,679, 3,276 or 30.68 per cent related to machinery, 1,304 or 12.21 per cent to ventilation and sanitation, 1,059 or 9.88 per cent to children, and the remainder varying from .07 to 2.97 per cent were orders relating to polishing wheels, boilers, hours of labor, fire escapes, etc.

Most of the other acts of the inspector related to permits, prosecutions of violations of the child labor and other factory laws, closing of factories, etc. Of the total number of classified acts of the inspector, 9,976 or 31.27 per cent were inspections, 10,679 or 33.47 per cent orders issued and 11,251 or 35.26 per cent other acts.

CLASSIFICATONN OF BUILDINGS AND PLACES INSPECTED	PLACES INSPECTED.	
	Number.	Per cent.
Factories and workshops	8,043	80.62
Cigar factories and shops	408	4.09
Garment making shops	876	8.78
Building operations	6	.06
Summer beer gardens	15	.15
Bowling alleys	94	.94
Mercantile establishments	134	1.35
Offices	12	.12
Hotels	65	.65
Boarding houses	44	.44
Lodging, tenement houses	61	.61
School houses	36	.36
Office buildings	12	.12
Opera houses	9	.09
Assembly halls	16	.16
Hospitals	7	.07
Chuhrces	19	.19
Other places	119	1.20
Total	9,976	100.00

CLASSIFICATION OF ORDERS ISSUED AND SUGGESTIONS MADE.	ORDERS.	
	Number.	Per cent.
Hours of labor	73	.68
Children under 14 dismissed	600	5.66
Children under 16 dismissed	454	4.22
Boilers, effecting same	7	.07
Buildings, effecting same	188	1.76
Fire escapes, stand-pipes	213	1.99
Stariways	114	1.07
Elevators, hoists	103	.96
Electric, other signals	83	.77
Machinery	3,276	30.68
Polishing and emery wheels	317	2.97
Doors	241	2.26
Vats, pans	17	.16
Ventilation, sanitation	1,304	12.21
Seats for females	215	2.01
Other orders	3,474	32.53
Total	10,679	100.00

Other duties performed by the inspectors.	Number.	Per cent.
Regular permits issued	9,994	88.83
Vacations, permits issued	907	8.06
Licenses granted to sweatshops	49	.43
Licenses revoked	9	.08
Order for employment and number of persons included in same	62	.56
Number of factories closed temporarily	22	.20
Orders to show cause why proceedings should not be instituted	51	.44
Prosecutions	157	1.40
Total	11,251	100.00

Remarks: There has been a great deal of other work performed both in office and otherwise which is too varied to be classified.

SUMMARY OF WORK PERFORMED BY INSPECTORS.

Classification.	Number.	Per cent.
Places inspected	9,976	31.27
Orders issued	10,679	33.47
Other acts	11,251	35.26
Total	31,906	100.00

BAKERY INSPECTION.

The Legislature of 1903, passed a law providing for the sanitary regulation of bakeries and other establishments manufacturing bread and other food products. This law in a general way specifies the kind of plumming to be used in these establishments, the kind of floors and walls of rooms, and how they shall be constructed; it specified where closets, privies, ash pits, and sleeping rooms shall be located with reference to bake and other work rooms; it provides for the clean, sanitary conditon of all delivery wagons, furniture, utensils, and rooms in general; it also provides for dressing rooms for workmen and the kind of clothing to be used by them; it provides that ample toilet facilities shall be provided for employes; it places certain restrictions upon the construction of basements of new buildings to be used as bakeries, and upon the use of basements of old buildings not heretofore used for this purpose. The law further provides that no person living, rooming, or boarding in a house where any infectious disease exists shall be employed in any bakery or food establishment.

The law confers the power of enforcing this act upon the bureau of labor, state factory inspector and assistant factory inspectors, local health officers, and a special inspector appointed for this purpose.

The following is the law in full:

BAKERY INSPECTION LAW.

Buildings Used as Bakeries, How Constructed.—Section 1. All buildings occupied for bakeries and confectionery establishments shall be well drained and all plumbing therein shall be constructed in accordance with well established sanitary principles and of good workmanship, and the rooms thereof used for the manufacture or sale of bread, and other food products shall be light, dry and airy. The room or rooms used for the manufacture of bread and other food products shall have floors and side walls so constructed as to exclude rats, mice and other vermin and said floor and side walls shall at all times be free from moisture and kept in a good state of repair. Said floor shall have a smooth surface and be constructed of wood, cement or tile laid in cement. But no floor shall be constructed in a room used for the manufacture of flour or meal products where the floor of said room is more than eight feet below the level of the street, sidewalk or adjacent ground. The walls and ceilings of such rooms used for the manufacture of bread and other flour and meal products shall be whitewashed at least as often as once in six months and the floors, utensils and furniture of such rooms as are used for the manufacture, storing or sale of said food products and the wagons used for the delivery of said food shall at all times be kept in a sanitary clean condition. The furniture and utensils of such rooms shall also be so arranged so that the same can be easily and perfectly cleaned.

Regulations as to Water-closets, Clothing, etc.—Section 2. No water closet, earth closet, privy or ash pit shall be within or communicate directly with the bake room or any other room used in the manufacture of bread or other flour or meal products. The sleeping places for workmen employed in bakeries shall be separate and distinct from the places used in the manufacture of bread or other food products. While engaged in the manufacture of bread or other flour or meal products the workmen in bakeries shall provide themselves with caps and slippers or shoes and an external suit of coarse linen, used for that purpose only, and these garments shall at all times be kept in a clean condition. All bakeries shall be provided with ample toilet facilities apart from the utensils used in the preparation of said foods to enable the workmen employed therein to keep their persons clean. Said bakeries shall also be provided with a separate dressing room to enable the workmen to change their clothes and keep the same in proper condition.

Regulations as to New Bakeries.—Section 3. After the passage of this act no new bakery shall be established in a room the floor of which is more than five feet below the level of the street, sidewalk or adjacent ground, and no bake shop shall be re-opened in such a room where the same has not been used for a period of over six months.

Regulations as to Infectious Diseases.—Section 4. No person shall work or be employed in or about any bakery or other establishment for the manufacture of food products during the time in which a case of infectious disease exists in the house in which he resides nor thereafter until the local board of health issues a certificate in writing that no danger of public contagion would result from the employment of said person in such establishment.

Duties of Occupants, Owners, etc., of Bakeries.—Section 5. It shall be the duty of every occupant, whether owner or lessee, of every premises used as a bakery or other establishment for the manufacture of food products to carry out the provisions of the act and make all changes and additions necessary therefor. In case such changes or additions are made upon the order of an officer or employe of the bureau of labor or of a board of health by the lessee of the premises he may at any time within thirty days after the completion thereof bring an action before any justice of the peace, municipal or district court, having competent jurisdiction against any person having an interest in such premises and may recover such proportion of the expense of making such changes and additions as the court adjudges should justly and equitably be borne by such defendant.

Duties of Bureau of Labor and Boards of Health.—Section 6. It shall be the duty of the state bureau of labor and boards of health, both state and local, to see that the provisions of this act are enforced and the commissioner of labor shall appoint a proper and competent person to act as bakery inspector for two years, who shall perform his duties under the direction of the said commissioner. The state factory inspector or any assistant state factory inspector shall have the same power as the bakery inspector. The said bakery inspector shall receive a salary of $1,000 per annum together with necessary traveling expenses, to be paid out of the general fund not otherwise appropriated.

In cities of five thousand inhabitants or over the common councils thereof may for the more perfect enforcement of the provisions of this act, provide by ordinance for the issuing of licenses to the owners or managers of bakeries and other establishments for the manufacture or sale of bread and other food products, provided, however, that the license fee to be required shall not exceed one dollar for any single establishment per annum.

Penalty.—Section 7. Any person who as owner or manager of a bakery or other establishment for the manufacture of food products or as a member of a firm or officer of a corporation owning or operating such establishment, or as an employe in said establishment, violates or fails to comply with any of the foregoing provisions of this act shall be guilty of a misdemeanor and shall be punished by a fine of not less than twenty dollars nor more than fifty dollars or by imprisonment in the county jail for not more than thirty days.

No criminal prosecution shall be made for any violation of the provisions of this act until thirty days after notice, in writing, by an officer or nspector of the bureau of labor or some officer or agent of the board of health, of any change necessary to be made to comply with the provisions of this act, has been served upon the owner, manager or officer operating said establishment, and not then, if in the meantime, such changes have been made in accordance with such notification.

Section 8. All acts or parts of acts inconsistent with the provisions of this act are hereby repealed.

Under this law an inspector was appointed who entered upon his duties June 30, 1903. For the year ending June 30, 1904, 112 cities and villages were visited and 568 establishments inspected. The following exhibits show the work accomplished by the inspector, giving name and location of establishments, hours labor required by each, the number of employes classified as to age and sex, stories and kind of buildings occupied, and the number of work-rooms used; the tables also present information concerning wage payments, bakeries and confectioneries using mechanical power, fire escapes, elevators, number of doors and exits, sanitary condition of establishments and utensils, closets, orders issued by the inspector, etc.

The first table is interesting because it forms a fairly complete directory of the bakeries in this state. The second table is a summary of the first by cities and villages, and is chiefly interesting as showing the relative importance of the various cities and villages as to this industry. The first table gives the name of the establishment or proprietor of each bakery or confectionery inspected, by cities and villages. It also gives the number of hours daily labor required by each, and the number of employes in each, classified as to age and sex. The second table gives the number of employes classified as to age and sex, and the number of establishments, in each city or village inspected.

TABLE SHOWING NAME AND LOCATION OF BAKERIES AND CONFECTIONERIES INSPECTED, HOURS OF LABOR REQUIRED IN EACH ESTABLISHMENT, AND THE CLASSIFICATION OF EMPLOYES AS TO AGE AND SEX.

Name of Firm.	Hours of labor.	Employes.			
		Male.	Female	Total.	Under 16 years of age.
ALGOMA, KEWAUNEE CO.—					
Weher, Jos.	8	....	....	....	....
ALMA, BUFFALO CO.—					
Rubn, M.	10	....	....	....	....
ANTIGO, LANGLADE CO.—					
Chilcate, E. H.†	4	....	2	2	....
Friedeman, H. A.	10	2	....	2	....
Keen, Geo.	10	3	....	8	....
Schlimer, J.	10	6	1	7	....
Total	....	11	3	14	....
APPLETON, OUTAGAMIE CO.—					
Britter, W. F.	8	....	....	....	....
Doerfler, J.	10	1	1	2	....
Holser, Conrad	11	....	1	1	....
Huchins Bros.†	6	....	....	....	....
Kaloedes, A. J.†	4	....	....	....	....
Kutler, L. F.	10	3	2	5	....
Luenben, Wm.	9	....	....	....	....
Pfefferle, L.	9	2	2	4	....
Roberts, C.	8	2	....	2	....
Stengle, A.	10	2	1	3	....
Total	....	10	7	17	....
ASHLAND, ASHLAND CO.—					
Demuth, W. L.	12	1	1	2	....
Johnson, A.	10	13	1	14	....
Total	....	14	2	16	....
BARABOO, SAUK CO.—					
Arndt, F. M.	12	....	....	....	....
Burm, J. C.	10	....	....	....	....
Goldfarb, L.	2	2	....	2	....
Hein, Herman	10	1	3	4	....
Lueth Bros.	10	1	....	1	....
Total	....	4	3	7	....
BARRON, BARRON CO.—					
Benson, C. J.	12	....	....	....	....
Hunt & May	8	....	....	....	....
BEAVER DAM, DODGE CO.—					
Brower, Otto†	8	....	1	1	....
Krueger, Gus	12	....	....	....	....
BELOIT, ROCK CO.—					
Coeredes, C.†	4	1	1	2	....
Corcoran, B. & Bros.	10	....	2	2	....
Geirich, M. G.†	3	....	2	2	....
Kansie, W. D., Jr.	10	6	1	7	....
Smiley, A. L.	10	9	1	10	....
Sterns, J. W.†	8	....	2	2	....
Total	....	31	10	41	....

TABLE SHOWING NAME AND LOCATION OF BAKERIES AND CONFECTIONERIES INSPECTED, ETC.—Continued.

NAME OF FIRM.	Hours of labor.	EMPLOYES.			
		Male.	Female.	Total	Under 16 years of age.
BERLIN, GREEN LAKE CO.—					
Boettge, C. M.	10	2	....	2	....
Ludwig, Otto	12	1	1	2	....
Total	....	3	1	4	....
BLACK RIVER FALLS, JACKSON CO.—					
Kelley, W. H.	10	1	....	1	....
BOSCOBEL, GRANT CO.—					
Comstock, W. A.	12	1	1	2	....
BRILLION, CALUMET CO.—					
Neumann, W.	10	1	1	2	....
BRODHEAD, GREEN CO.—					
Peschl, B.	10	3	1	4	....
BURLINGTON, RACINE CO.—					
Habberstadt, C.	8	1	....	1	....
Rose, J. G.	10	1	....	1	....
Total	....	2	....	2	....
CHILTON, CALUMET CO.—					
Schwartz, Mrs. John	10	1	....	1	....
CHIPPEWA FALLS, CHIPPEWA CO.—					
Bigler, A.	10	2	1	3	....
McDonald, A.	12	1	4	5	....
Total	....	3	5	8	....
CLINTONVILLE, WAUPACA CO.					
Gebhardt, Geo.	10	....	1	1	....
Sutherland, S. M.	12	....	2	2	....
Total	....	....	3	3	....
COLUMBUS, COLUMBIA CO.—					
Hicks, F. M.	....	....	....	....	....
Klate, W. G.	11	2	1	3	....
CUBA CITY, GRANT CO.—					
Meloy, H. D.	10	2	2	4	....
CUDAHY, MILWAUKEE CO.—					
Vogel, H.	12	2	....	2	....
CUMBERLAND, BARRON CO.—					
Coleman, J. P.	8	1	1	2	....
Hapslund, Geo.	6	....	....	....	....
DARLINGTON, LAFAYETTE CO.					
Harvey & Martin	8	1	1	2	....

TABLE SHOWING NAME AND LOCATION OF BAKERIES AND CONFECTIONERIES INSPECTED, ETC.—Continued.

NAME OF FIRM.	Hours of labor.	EMPLOYES.			
		Male.	Female	Total.	Under 16 years of age.
DELAVAN, WALWORTH CO.—					
Bailey, J. M.	10	2	2	4	....
Schlada, C. F.	10	1	1	2	....
Total	....	3	3	6	....
DE PERE, BROWN CO.—					
De Janghe, C. D.	7	....	....	....	....
Lampfer, W. H.	10	2	....	2	....
Van De Walle, P.	10	1	....	1	....
Wassenderg, M.	9	....	....	....	....
Total	....	3	....	3	....
DODGEVILLE, IOWA CO.—					
Brenner, C. H.	10	....	....	....	....
EAU CLAIRE, EAU CLAIRE CO.—					
Menms, John	10	....	....	....	....
Palace of Sweets Co.*	9	3	2	5	....
Smith's Baking Co.	10	8	....	8	....
Steadland, A.	10	5	1	6	1
Steady, M. B.†	7	1	3	4	....
Total	....	17	6	23	1
ELKHORN, WALWORTH CO.—					
Schmidt Bros.	10	2	1	3	....
ELLSWORTH, PIERCE CO.—					
Miller, J. J.	10	2	2	4	....
EVANSVILLE, ROCK CO.—					
Heffer, W. H.	10	1	1	2	....
FOND DU LAC, FOND DU LAC CO.—					
Allen, W. H.	12	....	1	1	....
Awanthe, J.†	4	....	1	1	....
Boex, Holman Co.†	10	21	45	66	13
Gens & Boettchn†	7	....	....	....	....
Gerhardt, J.	12	4	2	6	....
Hupe, G.†	10	2	3	5	....
Kuene, A.	8	....	....	....	....
Lapidus, M.†	5	1	....	1	....
Paulos, J.†	4	....	....	....	....
Pease, F.	10	1	....	1	....
Rick, F. C.	12	2	....	2	....
Schultz, A. W.	12	3	1	4	....
Snow Bros.	12	4	....	4	....
Total	....	38	53	91	13
FORT ATKINSON, JEFFERSON CO.—					
Shiley, H. B.	10	1	1	2	....
Spooner, F. I.	10	2	1	3	....
Total	....	3	2	5	....

TABLE SHOWING NAME AND LOCATION OF BAKERIES AND CONFECTIONERIES INSPECTED, ETC.—Continued.

NAME OF FIRM.	Hours of labor.	EMPLOYES.			
		Male.	Female.	Total	Under 16 years of age.
GRAND RAPIDS, WOOD CO.—					
Herschleb, H. A.	12	1	1	2	....
Petrick, Aug.	8	2	1	3	....
Total	....	3	2	5	....
GREEN BAY, BROWN CO.—					
Andre, E.	11	2	....	2	....
Arneu, C. & B. Co.	10	37	135	172	35
Ayoub & Gorrat†	10	2	1	3	....
Brenner, Gaselle Co.†	10	17	30	47	6
Brex, Wendels Co.†	10	15	23	38	9
Christianson Co.	....	....	....	....	....
Leich, F. C. & Co.	4	1	....	1	....
Micksch, J. V.	12	2	....	2	....
Miller, H. G.	10	3	....	3	....
Miller, Henry & Co.	10	3	....	3	....
Rockstroth, J. C.	15	....	....	....	....
Willaert	12	6	....	6	....
Total	....	88	189	277	50
HARTFORD, WASHINGTON CO.					
Baumgartl, A.	10	2	1	3	....
Thomas, H. J.	10	1	1	2	....
Total	....	3	2	5	....
HUDSON, ST. CROIX Co.—					
Crandell Bros.	10	3	....	3	....
Hoffman, D.	10	1	....	1	....
Singelman, H. M.	8	2	....	2	....
Struter, E. H.†	10	....	....	....	....
Total	....	6	....	6	....
HURLEY, IRON CO.—					
Reible, E. M.	10	1	....	1	....
Vazzetle, Jos.	8	1	....	1	....
Total	....	2	....	2	....
JANESVILLE, ROCK CO.—					
Benison & Lane	10	18	....	18	....
Calvin Bakery Co.	10	20	1	21	....
Gerke, Aug.	10	....	....	....	....
Geub Produce Co.	10	1	....	1	....
Janesville Candy Co.†	8	....	1	1	....
Razorke, A. J †	2	2	1	3	....
Rilley, T. F.	11	1	1	2	....
Smith, Al.†	4	....	1	1	....
Total	....	42	5	47	....
JEFFERSON, JEFFERSON CO.—					
Nuernbergu, G.	10	1	1	2	....
Spangler, A.	11	1	1	2	....
Total	....	2	2	4	....
JUNEAU, DODGE Co.—					
Hartman, A.	8	....	1	1	....

TABLE SHOWING NAME AND LOCATION OF BAKERIES AND CONFECTIONERIES INSPECTED, ETC.—Continued.

NAME OF FIRM.	Hours of labor.	EMPLOYES			
		Male.	Female	Total.	Under 16 years of age.
KAUKAUNA, OUTAGAMIE CO.—					
Lenhouts, H. A.	11	2	1	3	....
Steffen, Jos.	10	1	....	1	....
Total	....	3	1	4	....
KENOSHA, KENOSHA CO.—					
Faber & Co.	11	1	....	1	....
Kennard, J. A.	10	3	....	3	....
Kupper Cracker Co.	10	6	....	6	....
Papahl, J. H.	10	3	....	3	....
Richter, Geo.	10	3	....	3	....
Winther, W.	12	2	....	2	....
Total	....	18	....	18	....
KEWASKUM, WASHINGTON CO.					
Hellman, A.	7	....	....	....	....
KEWAUNEE, KEWAUNEE CO.—					
Pazdera, Jos.	10	....	....	....	....
Zuzanek	....	....	....	....	....
KIEL, MANITOWOC CO.—					
Fremy, H.	10	....	....	....	....
LA CROSSE, LA CROSSE CO.—					
Buchern, R.	12	....	....	....	....
Erkison, Mart	10	2	....	2	....
Funke, J. B. Co.†	10	48	140	188	19
Kratcheville, M.†	10	17	30	47	11
La Crosse Bakery Co.	10	2	....	2	....
La Crosse Cracker & Candy Co.*	10	38	40	78	14
Nelson, A. J.	10	....	1	1	....
Nustad, N.	12	2	....	2	....
Puplin Bakery Co.	10	9	2	11	....
Scheuerman, Otto	10	....	....	....	....
Schultz, Robert	10	2	1	3	....
Stonebreaker, H. A.	10	3	1	4	....
Total	....	123	215	338	44
LADYSMITH, GATES CO.—					
Jung, Carl	8	....	....	....	....
LAKE GENEVA, WALWORTH CO.—					
Buell & Matson	10	4	1	5	....
Fisher, A. L.	11	3	1	4	....
Stroupe Bros.	10	3	1	4	....
Total	....	10	3	13	....
LAKE MILLS, JEFFERSON CO.—					
Harrison & Heyn	....	....	....	....	....
Steele Bros.	10	1	....	1	....
LANCASTER, GRANT CO.—					
Johnson, D. C. & Co.	10	....	2	2	....
Lathrop, W. S.	12	2	2	4	....
Smith, J. P.	8	....	....	....	....
Total	....	2	4	6	....

TABLE SHOWING NAME AND LOCATION OF BAKERIES AND CONFECTIONERIES INSPECTED, ETC.—Continued.

NAME OF FIRM.	Hours of labor.	EMPLOYES			
		Male	Female.	Total.	Under 16 years of age.
MADISON, DANE CO.—					
Hellman (estate)	10	10	4	14	....
Keane & Taylor	10	....	....	....	....
Keeley M. W.†	10	2	11	13	....
Lindauer, M.	12	1	....	1	....
Madison Candy Co.†	10	16	20	36	6
Morshauser, Jos.	10	....	....	....	....
Quilty, M. J.	10	2	1	3	....
Spencer, Geo.	10	1	2	3	....
Teckemeyer Candy Co.†	10	12	25	37	2
Waltzinger, Chas.†	10	3	7	10	....
Weber, N. E.	11	2	1	3	....
Total	....	49	71	120	8
MANITOWOC, MANITOWOC CO.					
Chapman, D. C.	10	3	....	3	....
George Bros.	12	3	2	5	....
Schroeter, Carl	11	2	1	3	....
Weinart, John	6	....	....	....	....
Total	....	8	3	11	....
MARINETTE, MARINETTE CO.—					
Johnson, J. F.	10	2	....	2	....
Mattson, A.	8	....	....	....	....
Mueller, G. A.	10	2	....	2	....
Schmidt, W. P.	12	2	....	2	....
Total	....	6	....	6	....
MARSHFIELD, WOOD CO.—					
Harvey, J. A.	9	1	....	1	....
Nick, L.	8	3	....	3	....
Wright, L. A.	10	3	1	4	....
Total	....	7	1	8	....
MAUSTON, JUNEAU CO.—					
Blass, John	8	....	1	1	....
MAYVILLE, DODGE CO.—					
Achtenhagen, K.	10	....	....	....	....
Braun, F.	10	1	1	2	....
MEDFORD, TAYLOR CO.—					
Baurer, H.	9	2	....	2	....
MENASHA, WINNEBAGO CO.—					
Kind & Hoheisel	10	2	2	4	....
MENOMONIE, DUNN CO.—					
Anstett, J.	10	1	2	3	....
Steendahl, J.	12	2	1	3	....
Total	....	3	3	6	....
MERRILL, LINCOLN CO.—					
Baumann, Otto	10	3	1	4	....
Denne, L.	10	....	....	....	....
Haase, R. H.	10	2	....	2	1
Total	....	5	1	6	1

TABLE SHOWING NAME AND LOCATION OF BAKERIES AND CONFECTIONERIES INSPECTED, ETC.—Continued.

Name of Firm.	Hours of labor.	Employes.			
		Male.	Female.	Total.	Under 16 years of age.
MILTON, ROCK CO.—					
Anderson, J.	10	....	....	....	....
MILTON JCT., ROCK CO.—					
Daumth, Ned	....	....	....	....	....
MILWAUKEE, MILWAUKEE CO.					
Ackerman, Jacob	12	1	1	2	....
Aknaur, August	11	1	1	2	....
Altman, M.	10	....	....	....	....
Ambrosia Chocolate Co.	10	4	5	9	....
American Candy Co.	10	63	105	168	67
Anderson, E. J.	10	1	1	2	....
Ascher, F.	10	....	....	....	....
Atlas Bread Factory	10	51	7	58	2
Badger Candy Co.†	10	20	40	60	21
Bauer, Fred	10	1	....	1	....
Bauer, M.	12	1	....	1	....
Bender, Frank	11	....	....	....	....
Benz, W.	10	....	....	....	....
Berdalsch, F.	10	1	....	1	....
Bloomer, Jos.†	8	....	1	1	....
Boerth & Boerth Co.	10	8	....	8	1
Braun, Isadore	10	....	1	1	....
Brozowsky, Simon	10	....	....	....	....
Bucholz, W.	6	....	....	....	....
Bursk, C.	12	2	1	3	....
Carpenter & Skiles	10	40	6	46	....
Chaconies Candy Co.†	9	5	12	17	....
Conroy, J.*	10	3	2	5	....
Cream City Candy Co.†	9	4	12	16	....
Daniel, C.	10	....	....	....	....
Debus, Mrs. M.	12	3	....	3	....
Dietrick, Frank	10	2	....	2	....
Diez, M.	10	2	2	4	....
Dix, Albert	10	2	....	2	....
Dretzke, A.	10	2	2	4	....
Druminski, A.	10	1	1	2	....
Dryer, F.	8	1	4	5	....
Ebling, T.	10	2	1	3	....
Eckers, C.	10	1	....	1	....
Egelkraut, John	10	....	....	....	....
Ehrler, A.	10	4	....	4	....
Englehardt, F.	10	....	....	....	....
Erdmann, B.	10	1	1	2	....
Ertl, Geo.	10	....	....	....	....
Eschenbacher, A.	10	1	....	1	....
Evert, W.	12	1	....	1	....
Farchwin, H.†	10	2	....	2	....
Feenekes, J.	10	15	30	45	2
Fecker, H. T.	9	1	....	1	....
Felder, J.	10	2	1	3	....
Fick, C. J.	10	4	....	4	3
Fleischer, A.	10	2	2	4	....
Foelski, Chas.	11	1	....	1	....
Foelski, W.	11	2	1	3	....
Forh, H.	9	....	....	....	....
Forrer, R.	10	2	....	2	....
Franke, H.	10	....	....	....	....
Fuhrmann, A. E.	10	....	....	....	....
Fuller Candy Co.	10	2	8	5	....
Furtmann, Henry	10	....	....	....	....

TABLE SHOWING NAME AND LOCATION OF BAKERIES AND CONFECTIONERIES INSPECTED, ETC.—Continued.

NAME OF FIRM.	Hours of labor.	EMPLOYES.			
		Male.	Female	Total	Under 16 years of age.
MILWAUKEE. MILWAUKEE CO.					
Ganhs, Otto	10	1	....	1	....
Gaschn, B.	10	1	....	1	....
Gebhardt, Jos.	10	7	7	14	....
Gerhard, N.	10	3	2	5	....
George Bros.	10	1	2	3	....
Goetz, Aug.	11	1	2	3	....
Gorkow, W.	10	2	....	2	....
Graetz, F.	11	2	....	2	....
Graeurn, Louis	11	5	2	7	....
Gratlenthalen Geo.	10	3	1	4	1
Griess, Robt.	11	2	1	3	....
Guelzow, H.	12	2	1	3	....
Guse, G.	10	2	1	3	....
Gutemberg, A.	12	....	....	....	....
Guzke, W.	10	....	....	....	....
Hachls, E.	12	....	....	....	....
Hackbarth, C. A.	10	1	....	1	....
Hackbarth, E.	10	....	....	....	....
Haesll, H.	10	2	....	2	....
Hagendorf, P.	9	1	1	2	....
Halen, N.	11	3	1	4	....
Heffinger, S.	12	1	1	2	....
Herz, John	12	1	1	2	....
Herzberg, E.	10	1	1	2	....
Hettner, Jos.	10	2	1	3	....
Hille, Jos.	10	....	....	....	....
Hiffman, Aug.	10	3	....	3	....
Hill, A.	13	4	2	6	....
Holwick, John	12	2	1	3	....
Hoyler, Carl	10	2	....	2	....
Ihrig, Geo.	10	1	....	1	....
Jaeger, Bruno	10	14	....	14	....
Jaeger, Oswald	10	24	2	26	....
Jahr, E. E.	9	....	....	....	....
Jansky, John	10	2	....	2	....
Jessen, H.	10	2	1	3	....
John, Albert	11	1	....	1	....
John, Ernest	12	1	....	1	....
Johnston, Robt. A., Co.*	10	127	148	275	40
Kaemmerrs, Geo.	10	....	....	....	....
Kaiser, Karl	11	3	1	4	....
Kaiser J.	11	3	....	3	....
Kaiser, Otto	11	1	1	2	....
Kallmeyer, C.	10	1	1	2	....
Kaufer, D.	9	1	1	2	....
Kelper, B.	11	1	....	1	....
Kons, M.	10	2	1	3	....
Korthals, Gus.	10	1	....	1	1
Kosecky, J.	9	1	....	1	....
Kraemer, Carl	12	....	....	....	....
Kraemer, G.	10	4	2	6	....
Krueger, Aug.	12	3	....	3	....
Krumholz, A.	10	....	....	....	....
Kurz, John	11	3	1	4	....
Lage, C.	8	1	1	2	....
Lage, E. M.	11	2	1	3	....
Leahrke, Frank	10	1	....	1	....
Lembergar, Jos.	10	....	....	....	....
Linderman, J.	12	....	....	....	....
Lindner, P.	10	....	....	....	....
Loranz Bros.	10	10	....	10	4
Ludka, B.	10	1	....	1	....
Luick, John	10	4	3	7	....
Luick, W. F.*	10	4	3	7	....

TABLE SHOWING NAME AND LOCATION OF BAKERIES AND CONFECTIONERIES INSPECTED, ETC.—Continued.

NAME OF FIRM.	Hours of labor.	EMPLOYES.			
		Male.	Female.	Total.	Under 16 years of age.
MILWAUKEE, MILWAUKEE CO.					
Malick, I.	10	1	1	2	....
Marfman, Otto	12	4	1	5	....
Martin, F.	10	6	5	11	....
Matt, Edward	10	....	....	....	....
Matt, John	11	2	....	2	....
Matyas, Leopold	12	7	1	8	....
Mauer, John	10	1	1	2	....
Mauer, L.	10	10	3	13	....
Mayer, Frank	7	1	....	1	....
Meures, Louis	10	....	....	....	....
Meyer, Anton	12	3	....	3	1
Meyer, H.	10	1	....	1	....
Meyer, Wm.	10	4	2	6	....
Michalski, N.	11	....	....	....	....
Miller, O. H.†	8	....	1	1	....
Miller, Robert	11	1	1	2	....
Milwaukee Bakery Co.	10	1	....	1	....
Molt, John	10	2	1	3	....
Mors, O.	10	2	....	2	....
Mosher, C., & Co.	9	16	27	43	1
Muehlbauer, Jos.	9	1	....	1	....
Mueller, H.	10	2	1	3	....
Mugge, Henry	12	1	....	1	....
Nagle, Paul	10	....	1	1	....
National Biscuit Co.*	10	204	208	412	67
Natkoosky, John	10	....	....	....	....
Netz, Hugo	10	....	....	....	....
Nielsen, Fred	10	2	....	2	....
Noll, Jos.	11	....	1	1	....
Obermeyer, K.	10	1	1	2	....
Oehme, Louis	11	2	1	3	....
Oestreiche, Jos.	10	1	....	1	....
Oswald, W.	7	1	....	1	....
Paney, Karl†	8	1	3	4	....
Persky, Anna	10	1	....	1	....
Peters, F.	10	1	....	1	....
Peters, Jas.	10	2	....	2	....
Pflugart Co.†	10	23	64	87	36
Pinses, J.	11	2	1	3	....
Pixley, C. A.	10	4	1	5	....
Plantz, W. A.	10	....	....	....	....
Platz, Edwin	10	2	1	3	1
Pleas, J.	10	1	....	1	....
Poehlman, J.	10	2	....	2	....
Pohl, Aug.	11	1	....	1	....
Puhl, R.	12	....	....	....	....
Puls, John	12	1	....	1	....
Recklinghousen, S.	10	....	....	....	....
Redel, John†	10	....	2	2	....
Rediceker, W.	10	1	1	2	....
Reichelt, R.	11	....	....	....	....
Reinhardt, Aug.	10	....	....	....	....
Rittberger, E.	11	2	1	3	....
Rittberger, E.	10	....	....	....	....
Rogowski, Anton	10	....	....	....	....
Rose, G.†	2	....	....	....	....
Roseckey, Anton, & Co.	11	2	1	3	....
Rosenbaum, W. F.	10	18	3	21	....
Rosenkrans, W.	10	1	....	1	....
Rossow, F.	13	1	....	1	....
Rotter, L. J.	10	2	....	2	....
Rudolph, L.	10	1	....	1	....
Rupp, Fred	10	2	1	3	....
Ruppin, Marx	10	1	1	2	....

TABLE SHOWING NAME AND LOCATION OF BAKERIES AND CONFECTIONERIES INSPECTED, ETC.—Continued.

NAME OF FIRM.	Hours of labor.	EMPLOYES.			
		Male.	Female	Total.	Under 16 years of age.
MILWAUKEE, MILWAUKEE CO.					
Salsmann, Mrs. F.	12	1	....	1	....
Samer, Geo.	10	....	....	....	....
Sandek, A.	10	1	2	3	....
Sandes, Robt.	10	1	1	2	....
Schafer, Karl	12	2	....	2	....
Scheldicker, Jos.	8	....	....	....	....
Schiffer, F.	12	5	....	5	....
Schmidt, A.	11	2	1	3	....
Schmidt, B.	12	1	....	1	....
Schmidt, Jos.	12	1	....	1	....
Schmidt, J. L.	10	1	....	1	....
Schneider, F.	11	2	....	2	1
Schneller, Max	9	1	....	1	....
Schrabbach, E.	12	3	1	4	....
Schultz, Frank	11	1	....	1	....
Schussur, Oscar	10	1	....	1	....
Schuster, Wl.	11	1	1	2	....
Scultz, G.	10	2	....	2	....
Seeling, A.	12	....	1	1	1
Sichling, Geo.	10	3	....	3	....
Siefert, A.	8	....	....	....	....
Siegfried, Adam	10	2	....	2	....
Singer, F. B.	11	4	1	5	....
Somers, F.	10	1	....	1	....
Standard Candy Co.†	10	17	21	38	8
Steffel, Anton	10	....	....	....	....
Talsky, Anton	10	....	....	....	....
Talsky, E.	12	2	....	2	....
Talsky, F.	10	1	1	2	....
Thalman, F.	10	2	1	3	....
Thauner, Otto	11	1	1	2	....
Thurring, Geo.	9	4	....	4	....
Tillema, Geo.†	9	3	11	14	....
Topp, Julius	12	1	....	1	....
Traeger, Otto	8	....	....	....	....
Traitin, E.	11	6	2	8	....
Trittin, F.	12	1	....	1	....
Tyborsky, John	12	....	....	....	....
Tyborsky, Martin	12	3	....	3	....
Urech, Jacob	8	1	....	1	....
Urmanski, J.	12	....	....	....	....
Vegelahm, W.	10	1	....	1	....
Vogel, Frank	12	1	....	1	....
Vogel, J. M.	10	2	1	3	....
Vohland, Ernest	8	....	....	....	....
Voss, W.	8	1	....	1	....
Wallinger, C.	10	1	....	1	....
Weber, A. F.*	9	10	28	38	1
Weickert, G.	10	1	....	1	....
Weis, L.	10	1	....	1	....
Wellen A.	10	....	....	....	....
Wendelburg, C.	11	....	....	....	....
Wendelburg, M.	11	2	....	2	....
Wendels, Paul	12	2	....	2	....
Wiedner, Albert	11	2	1	3	....
Wilde, A.	8	....	....	....	....
Wilhelms, Geo.	10	6	3	9	1
Williams, John	12	5	1	6	....
Winniger, B.	9	2	....	2	....
Wirth, G.	10	1	1	2	....
Wirthnein, Louis†	2	....	1	1	....
Witle, Fred	10	1	1	2	....
Witle, L.	10	1	1	2	....
Ziegler, Geo., & Co.	10	104	145	249	124
Total	....	1,107	1,003	2,110	384

TABLE SHOWING NAME AND LOCATION OF BAKERIES AND CONFECTIONERIES INSPECTED, ETC.—Continued.

Name of Firm.	Hours of labor.	Employes.			
		Male.	Female	Total.	Under 16 years of age.
MINERAL POINT, IOWA CO.—					
Horning, C.	10	2	1	3	....
MONROE, GREEN CO.—					
Oswald, C.	9	1	....	1	....
Pfeffer, Geo.	12	3	2	5	....
Wagner, J. M.	10	3	2	5	....
Total	....	7	4	11	....
NEENAH, WINNEBAGO CO.—					
Livermore & Son	8	....	....	....	....
Obhde, Karl	12	1	....	1	....
Reynolds, G. J.†	10	....	1	1	....
Steele Candy Co.†	6	....	2	2	....
Total	....	1	3	4	....
NEILLSVILLE, CLARK CO.—					
Kubat & Radek	10	1	1	2	....
NEW LONDON, WAUPACA CO.—					
Holtzborn, H.	12	....	....	....	....
Whelden, Geo.	8	....	1	1	....
NEW RICHMOND, ST. CROIX Co —					
Nelson, C. E.	12	1	1	2	....
NORTH MILWAUKEE, MILWAUKEE CO.—					
Jacob, John	11	1	....	1	....
OCONOMOWOC, WAUKESHA Co.					
Harting, Frank	10	1	1	2	....
Herro & Arbagey†	2	1	....	1	....
Paash, H. F.	10	....	....	....	....
Total	....	2	1	3	....
OCONTO, OCONTO CO.—					
Aubery, A.	10	....	....	....	....
Leppel M.	15	1	....	1	....
OSHKOSH, WINNEBAGO CO.—					
Citron, Geo.†	3	2	1	3	....
Crowell, R. I.	12	5	2	7	....
Fisher, A.	12	2	....	2	1
Gust, Emil	10	....	....	....	....
Heiss, Mrs. F.	11	3	....	3	....
Huppl, M	10	3	1	4	....
Kamm, H.	9	2	....	2	....
Laus, Jos.†	10	3	6	9	....
Lindner, H.	12	2	1	3	....
Luebke, F. C.	12	3	1	4	....
Maluf, James†	2	....	....	....	....
Oaks, John†	10	1	4	5	....
Pelton, H. G.	11	8	2	10	....
Piston, H.	10	....	....	....	....
Strohschein, R.	11	....	....	....	....
Wabintz, K.	10	....	1	1	....
Wickert, C. A.†	8	1	2	3	....
Total	....	35	21	56	1

TABLE SHOWING NAME AND LOCATION OF BAKERIES AND CONFECTIONERIES INSPECTED, ETC.—Continued.

Name of Firm.	Hours of labor.	**Employes.**			
		Male.	Female.	Total.	Under 16 years of age.
PHILLIPS, PRICE CO.—					
Mendle, John	8	....	1	1	....
PLATTEVILLE, GRANT CO.—					
Heming, H. L.	10	3	1	4	....
McClurg & Holt	2	....	1	1	....
Schweder, L. J.	8	....	....	....	....
Total	....	3	2	5	....
PLYMOUTH, SHEBOYGAN CO.—					
Mueller, M.	10	1	....	1	....
Wagner, R.	10	....	....	....	....
PORTAGE, COLUMBIA CO.—					
Buglass, D., & Co.	12	4	1	5	....
Dietrich, G. F.	10	1	1	2	....
Fink, E.	6	....	....	....	....
Morthey, R. A.	12	1	1	2	....
Winder, J. W., & Co.†	2	....	....	....	....
Total	....	6	3	9	....
PORT WASHINGTON, OZAUKEE Co.—					
Johnston, A. J.	10	1	1	2	....
Schuetter, J.	11	2	....	2	....
Total	....	3	1	4	....
PRAIRIE DU CHIEN, CRAWFORD CO.—					
Boucher, D. G.	8	1	....	1	....
Moronsek, L.	8	1	1	2	....
Total	....	2	1	3	....
PRINCETON, GREEN LAKE CO.					
Henry, John	5	....	....	....	....
Witlemore, W.	10	....	....	....	....
RACINE, RACINE CO.—					
Bettry, Mrs. C.	10	3	....	3	....
Halberstadt, J.	10	2	....	2	....
Jenniches, P., & Sons	10	3	....	3	....
Lintner, F.	11	8	2	10	....
Mazurine, G.†	10	1	2	3	....
Schnekloth & Johnson	10	3	....	3	....
Schultz, O. B.	10	6	2	8	1
Tidyman, B. & C.	9	8	2	10	....
Total	....	34	8	42	1
REEDSBURG, SAUK CO.—					
Kerrigan, C. P.	8	3	2	5	....
RHINELANDER, ONEIDA CO.—					
Kirk, C. D., & Co.	10	1	1	2	....
Kohanek & Neutauer	10	....	1	1	....

TABLE SHOWING NAME AND LOCATION OF BAKERIES AND CONFECTIONERIES INSPECTED, ETC.—Continued.

NAME OF FIRM.	Hours of labor.	EMPLOYES.			
		Male.	Female.	Total.	Under 16 years of age.
RICE LAKE, BARRON CO.—					
Boles, A. G.	10	1	1	2	....
Finsterwalder, M.	7	....	....	....	....
RICHLAND CENTER, RICHLAND CO.—					
Parry, H.	10	1	4	5	....
Wertz, A. C.	8	1	1	2	....
Total	....	2	5	7	....
RIPON, FOND DU LAC CO.—					
Leichmath, E. F.	7	1	2	3	....
Reickert, Urban	12	3	2	5	1
Total	....	4	4	8	1
RIVER FALLS, PIERCE CO.—					
Tingwald & Youcus	10	3	....	3	....
Woehrle, W.	10	3	....	3	....
Total	....	6	....	6	....
SHAWANO, SHAWANO CO.—					
Garfield, B. H.	8	2	2	4	....
Ludolph, G. W.	10	1	1	2	....
Rohloff, R. P.	8	1	2	3	....
Total	....	4	5	9	....
SHEBOYGAN, SHEBOYGAN CO.—					
Cochiroubas, G.	8	2	....	2	....
Faher, John	10	4	....	4	....
Hirch, G. A.	10	2	1	3	....
Calitt, A. H.	8	....	2	2	....
Kuster, K.	10	2	....	2	....
Mohr, Emil	10	9	2	11	....
Pfister, Thos.	12	....	....	....	....
Wagner, G. A.	10	....	....	....	....
Wickert, Louis	10	2	....	2	....
Total	....	21	5	26	....
SHEBOYGAN FALLS, SHEBOYGAN CO.—					
Dreagert, F.	9	1	1	2	....
SHELL LAKE, WASHBURN CO.—					
Gareth, G. J.	6	....	....	....	....
SOUTH MILWAUKEE, MILWAUKEE CO.—					
Cessinski, Leo	7	....	....	....	....
Spies, Jacob	10	2	1	3	....
SPARTA, MONROE CO.—					
Doxrud, O. E.	7	....	....	....	....
Toole, W. E.	6	1	1	2	....
Kuehn, C.	8	1	....	1	....
Total	....	2	1	3	....

TABLE SHOWING NAME AND LOCATION OF BAKERIES AND CONFECTIONERIES INSPECTED, ETC.—Continued.

NAME OF FIRM.	Hours of labor.	EMPLOYES.			
		Male.	Female.	Total.	Under 16 years ol age.
SPOONER, WASHBURN CO.—					
Nehlm, Chas.	10	....	....	....	....
STEVENS POINT, PORTAGE CO.					
Bennett, D.	10	3	1	4	....
Demkie, A.	10	2	....	2	....
Julier, E. H.	10	2	....	2	....
Mocogin Bros.	9	1	....	1	....
Total	....	8	1	9	....
STOUGHTON, DANE CO.—					
Jacobson Bros.	10	1	1	2	....
Olson, Mrs. E.	10	3	1	4	....
Total	....	4	2	6	....
STURGEON BAY, DOOR CO.—					
Fengler, Frank	8	....	....	....	....
Fredrickson, J.	12	2	1	3	....
SUPERIOR, DOUGLAS CO.—					
Crowell, C. W., & Co.	10	3	2	5	....
Iowa Bakery	10	5	1	6	....
Leamon, G. W.	10	7	1	8	....
Nelson, N.	12	6	1	7	....
Royal Bakery	9	5	3	8	....
Strauch, John	8	2	....	2	....
Total	....	28	8	36	....
TOMAH, MONROE CO.—					
McMullen, W. J.	9	1	....	1	....
Schmidt, Emil	10	1	....	1	....
Total	....	2	....	2	....
TOMAHAWK, LINCOLN CO.—					
Menner, J. M.	10	2	....	2	....
TWO RIVERS, MANITOWOC CO.					
Co.—					
Hartung, H.	10	1	1	2	....
Ruhl, Louis	10	....	....	....	....
VIROQUA, VERNON CO.—					
Lind, W. D.	10	....	2	2	....
Nelson, C. A.	10	1	1	2	....
Total	....	1	3	4	....
WASHBURN, BAYFIELD CO.—					
Borgrem, H. M.	12	4	1	5	....
Olson, Mrs. L.	10	1	1	2	....
Total	....	5	2	7	....

TABLE SHOWING NAME AND LOCATION OF BAKERIES AND CONFECTIONERIES INSPECTED, ETC.—Continued.

Name of Firm.	Hours of labor.	Employes.			
		Male.	Female.	Total.	Under 16 years of age.
WATERTOWN, JEFFERSON CO.—					
Heyms, C. E.	10	2	....	2	....
Koser, F. O.	10	2	....	2	....
Kramer, W.	10	....	1	1	....
Krueger, Mrs. W. H.	10	3	....	3	....
Maywood, W.†	10	1	2	3	....
Mutter, J. A.†	10	....	1	1	....
Sheetz, Gus	12	....	....	....	....
Total	....	8	4	12	....
WAUKESHA, WAUKESHA CO.—					
Arnold, W.	9	3	....	3	....
Kullman, T., & Sons	10	1	....	1	....
Reed, R. W.	10	1	....	1	....
Smith, C. E.	10	3	....	3	....
Total	....	8	....	8	....
WAUPACA, WAUPACA CO.—					
Dutton, A. O.	11	1	1	2	....
Hanson, R. P.	10	2	2	4	....
Total	....	3	3	6	....
WAUPUN, FOND DU LAC CO.—					
Enggard, Peter	10	1	....	1	....
WAUSAU, MARATHON CO.—					
Hess, Geo.	10	2	1	3	....
Kischel, Gus.	10	....	....	....	....
Oswald, H.	10	5	4	9	....
Oswald, J. F.	10	6	2	8	....
Total	....	13	7	20	....
WAUWATOSA, MILWAUKEE Co.					
Baier, W.	10	2	....	2	....
Bauer, H.	10	2	....	2	....
Total	....	4	....	4	....
WEST ALLIS, MILWAUKEE Co.—					
Schmidt, Geo.	12	1	....	1	....
WEST BEND, WASHINGTON Co.					
Schlegel, G.	10	2	....	2	....
Total	....	28	8	36	....
WHITEWATER, WALWORTH Co.					
Callahan, J. W.	12	1	....	1	....
Sachs, Mrs. A.	10	1	1	2	....
Total	....	2	1	3	....

*Bakery and Confectionery.
†Confectionery.

SUMMARY BY CITIES OR LOCATION OF THE NUMBER OF ESTABLISHMENTS INSPECTED, NUMBER OF EMPLOYES CLASSIFIED AS TO AGE AND SEX.

PLACE.	Number of establishments.	EMPLOYES.			Children under 16 years of age.
		Male.	Female.	Total.	
Algoma, Kewaunee Co.	1	....	....	....	....
Alma, Buffalo Co.	1	....	....	....	....
Antigo, Langlade Co.	4	11	3	14	....
Appleton, Outagamie Co.	10	10	7	17	....
Ashland, Ashland Co.	2	14	2	16	....
Baraboo, Sauk Co.	5	4	3	7	....
Barron, Barron Co.	2	....	....	....	....
Beaver Dam, Dodge Co.	2	....	1	1	....
Beloit, Rock Co.	6	31	10	41	....
Berlin, Green Lake Co.	2	3	1	4	....
Black River Falls, Jackson Co.	1	1	....	1	....
Boscobel, Grant Co.	1	1	1	2	....
Brillion, Calumet Co.	1	1	1	2	....
Brodhead, Green Co.	1	3	1	4	....
Burlington, Racine Co.	2	2	....	2	....
Chilton, Calumet Co.	1	1	....	1	....
Chippewa Falls, Chippewa Co.	2	3	5	8	....
Clintonville, Waupaca Co.	2	....	3	3	....
Columbus, Columbia Co.	2	2	1	3	....
Cuba City, Grant Co.	1	2	2	4	....
Cudahy, Milwaukee Co.	1	2	....	2	....
Cumberland, Barron Co.	2	1	1	2	....
Darlington, La Fayette Co.	1	1	1	2	....
Delavan, Walworth Co.	2	3	3	6	....
De Pere, Brown Co.	4	3	....	3	....
Dodgeville, Iowa Co.	1	....	....	....	....
Eau Claire, Eau Claire Co.	5	17	6	23	1
Elkhorn, Walworth Co.	1	2	1	3	....
Ellsworth, Pierce Co.	1	2	2	4	....
Evansville, Rock Co.	1	1	1	2	....
Fond du Lac, Fond du Lac Co.	13	38	53	91	13
Fort Atkinson, Jefferson Co.	2	3	2	5	....
Grand Rapids, Wood Co.	2	3	2	5	....
Green Bay, Brown Co.	12	88	189	277	50
Hartford, Washington Co.	2	3	2	5	....
Hudson, St. Croix Co.	4	6	....	6	....
Hurley, Iron Co.	1	2	....	2	....
Janesville, Rock Co.	8	42	5	47	....
Jefferson, Jefferson Co.	2	2	2	4	....
Juneau, Dodge Co.	1	....	1	1	....
Kaukauna, Outagamie Co.	2	3	1	4	....
Kenosha, Kenosha Co.	6	18	....	18	....
Kewaskum, Washington Co.	1	....	....	....	....
Kewaunee, Kewaunee Co.	2	....	....	....	....
Kiel, Manitowoc Co.	1	....	....	....	....
La Crosse, La Crosse Co.	12	123	215	338	44
Ladysmith, Gates Co.	1	....	....	....	....
Lake Geneva, Walworth Co.	3	10	3	13	....
Lake Mills, Jefferson Co.	2	1	....	1	....
Lancaster, Grant Co.	3	2	4	6	....
Madison, Dane Co.	11	49	71	120	8
Manitowoc, Manitowoc Co.	4	8	3	11	....
Marinette, Marinette Co.	4	6	....	6	....
Marshfield, Wood Co.	3	7	1	8	....
Mauston, Juneau Co.	1	....	1	1	....
Mayville, Dodge Co.	2	1	1	2	....
Medford, Taylor Co.	1	2	....	2	....
Menasha, Winnebago Co.	1	2	2	4	....
Menomonee, Dunn Co.	2	3	3	6	....
Merrill, Lincoln Co.	3	5	1	6	1
Milton, Rock Co.	1	....	....	....	....
Milton Jct., Rock Co.	1	....	....	....	....
Milwaukee, Milwaukee Co.	247	1,107	1,003	2,110	384
Mineral Point, Iowa Co.	1	2	1	3	....
Monroe, Green Co.	3	7	4	11	....
Neenah, Winnebago Co.	4	1	3	4	....
Neillsville, Clark Co.	1	1	1	2	....
New London, Waupaca Co.	2	....	1	1	....
New Richmond, St. Croix Co.	1	1	1	2	....

BAKERIES INSPECTED—SUMMARY BY CITIES—Continued.

PLACE.	Number of establishments.	EMPLOYES.			Children under 16 years of age.
		Male.	Female.	Total.	
North Milwaukee, Milwaukee Co.	1	1	....	1	....
Oconomowoc, Waukesha Co.	3	2	1	3	....
Oconto, Oconto Co.	2	1	....	1	....
Oshkosh, Winnebago Co.	17	35	21	56	1
Phillips, Price Co.	1	....	1	1	....
Platteville, Grant Co.	3	3	2	5	....
Plymouth, Sheboygan Co.	2	1	....	1	....
Portage, Columbia Co.	5	6	3	9	1
Port Washington, Ozaukee Co.	2	3	1	4	....
Prairie du Chien, Crawford Co.	2	2	1	3	....
Princeton, Green Lake Co.	2	....	....	....	....
Racine, Racine Co.	8	34	8	42	1
Reedsburg, Sauk Co.	1	3	2	5	....
Rhinelander, Oneida Co.	2	1	2	3	....
Rice Lake, Barron Co.	2	1	1	2	....
Richland Center, Richland Co.	2	2	5	7	....
Ripon, Fond du Lac	2	4	4	8	1
River Falls, Pierce Co.	2	6	....	6	....
Shawano, Shawano Co.	3	4	5	9	....
Sheboygan, Sheboygan Co.	9	21	5	26	....
Sheboygan Falls, Sheboygan Co.	1	1	1	2	....
Shell Lake, Washburn Co.	1	....	....	....	....
South Milwaukee, Milwaukee Co.	2	2	1	3	....
Sparta, Monroe Co.	3	2	1	3	....
Spooner, Washburn Co.	1	....	....	....	....
Stevens Point, Portage Co.	4	8	1	9	....
Stoughton, Dane Co.	2	4	2	6	....
Sturgeon Bay, Door Co.	2	2	1	3	....
Superior, Douglas Co.	6	28	8	36	....
Tomah, Monroe Co.	2	2	....	2	....
Tomahawk, Lincoln Co.	1	2	....	2	....
Two Rivers, Manitowoc Co.	2	1	1	2	....
Viroqua, Vernon Co.	2	1	3	4	....
Washburn, Bayfield Co.	2	5	2	7	....
Watertown, Jefferson Co.	7	8	4	12	....
Waukesha, Waukesha Co.	4	8	....	8	....
Waupaca, Waupaca Co.	2	3	3	6	....
Waupun, Fond du Lac Co.	1	1	....	1	....
Wausau, Marathon Co.	4	13	7	20	....
Wauwatosa, Milwaukee Co.	2	4	....	4	....
West Allis, Milwaukee Co.	1	1	....	1	....
West Bend, Washington Co.	1	2	....	2	....
Whitewater, Walworth Co.	2	2	1	3	....
Total	568	1,897	1,730	3,627	505

BAKERY AND CONFECTIONERY EMPLOYES, CLASSIFIED AS TO AGE.

	Number.	Per cent.
Persons 16 years and over	3,627	87.78
Children under 16 years	505	12.22
Total	4,132	100.00

BAKERY AND CONFECTIONERY EMPLOYES OVER 16 YEARS OF AGE, CLASSIFIED AS TO SEX.

	Number.	Per cent.
Number of male persons over 16 years	1,897	52.30
Number of female persons over 16 years	1,730	47.70
Total	3,627	100.00

The two preceding exhibits show the number of employes in the bakery and other food establishments visited by the inspector. Of the 4,132 employes, 505, or 12.22 per cent are children under 16 years of age, and 3,627 or 87.78 per cent are over 16. This means that one employe out of 8 is a child under 16. Of the 3,627 employes over 16, 1,897 or 52.3 per cent are males and 1,730 or 47.7 per cent females.

Many bakeries and confectioneries occupy entire buildings, while others occupy only single stories. The following exhibit shows the stories occupied by these various establishments.

Establishments occupying—	Number.	Per cent.
Basement and first floor	296	52.10
Basement, first and second floors	8	1.41
Basement, first, second and third floors	8	1.41
Basement, first, second, third and fourth floors	3	.53
Basement, first, second, third, fourth and fifth floors	1	.18
Basement and second floor	2	.35
Basement and third floor	1	.18
Basement and fifth floor	2	.35
Basement and sixth floor	1	.18
First floor	241	42.42
First and second floor	2	.36
Second floor	1	.18
Third floor	2	.35
Total	568	100.00

Of the 568 establishments, 296 or 52.1 per cent occupy both basement and first floor, 241 or 42.42 per cent occupy the first floor only, and the remaining 31 or 5.48 per cent occupy various other portions of buildings indicated in the table.

The following exhibit shows the number of "basements," "first floors," "second floors," etc., occupied by the various bakeries and confectioneries:

Floors occupied.	Number.	Per cent.
Basement	322	34.67
First floor	559	60.17
Second floor	25	2.69
Third floor	15	1.62
Fourth floor	4	.42
Fifth floor	3	.32
Sixth floor	1	.11
Total	929	100.00

The 568 establishments occupy 929 floors, an average of one and one-half floors to the establishment. 322 or 34.67 per cent of these are basements, 559 or 60.17 per cent first floors, 25 or 2.69 per cent second floors, 15 or 1.62 per cent third floors, and the remaining 8 or less than 1 per cent are fourth, fifth, and sixth floors.

ESTABLISHMENTS CLASSIFIED AS TO WHETHER LOCATED "IN MILWAUKEE" OR "OUTSIDE MILWAUKEE."

CLASSIFICATION.	ESTABLISHMENT.	
	Number.	Per cent.
Milwaukee	246	43.31
Outside Milwaukee	322	56.69
Total	568	100.00

Over two-fifths of the bakeries inspected are located in Milwaukee, and less than three-fifths outside.

ESTABLISHMENTS CLASSIFIED ACCORDING TO NUMBER OF WORK ROOMS.

CLASSIFICATION.	MILWAUKEE.		OUTSIDE MILWAUKEE.		TOTAL.	
	Number.	Per cent	Number.	Per cent.	Number.	Per cent.
One work room	226	91.50	306	95.32	532	93.66
Two work rooms	10	4.06	4	1.25	14	2.46
Three work rooms	5	2.03	5	1.56	10	1.76
Four work rooms	1	.40	2	.62	3	53
Five work rooms	....	....	4	1.25	4	.70
Six work rooms	2	.81	....	....	2	.35
Ten work rooms	1	.40	....	....	1	.18
Eleven work rooms	1	.40	....	....	1	.18
Twelve work rooms	1	.40	....	....	1	.18
Total	247	100.00	321	100.00	568	100.00

This table shows that 226 or 91.5 per cent of the bakeries in Milwaukee, and 306 or 95.32 per cent of those outside have but one work room. None of the bakeries outside Milwaukee have over 5 work rooms, while they run as high as 12 work rooms to the establishment in Milwaukee.

The three following exhibits show the number of “frame,” “brick,” and “total” buildings in which bakeries and confectioneries are located, classified as to height.

NUMBER OF FRAME BUILDINGS.

CLASSIFICATION.	MILWAUKEE.		OUTSIDE MILWAUKEE.		TOTAL.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
One story	49	26.49	46	31.08	95	28.53
Two stories	132	71.35	102	68.92	234	70.27
Three stories	3	1.62	....	....	3	.90
Four stories	1	.54	....	....	1	.30
Total	185	100.00	148	100.00	333	100.00

NUMBER OF BRICK BUILDINGS.

CLASSIFICATION.	MILWAUKEE.		OUTSIDE MILWAUKEE.		TOTAL.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
One story	1	1.61	13	7.51	14	5.96
Two stories	38	61.30	144	83.24	182	77.45
Three stories	17	27.42	14	8.09	31	13.19
Four stories	1	1.61	2	1.16	3	1.28
Five stories	4	6.45	....	....	4	1.70
Six stories	1	1.61	....	....	1	.43
Total	62	100.00	173	100.00	235	100.00

BUILDINGS CLASSIFIED AS TO HEIGHT.

CLASSIFICATION.	MILWAUKEE.		OUTSIDE MILWAUKEE.		TOTAL.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
One story	50	20.24	59	18.38	109	19.19
Two stories	170	68.83	246	76.64	4.16	73.24
Three stories	20	8.10	14	4.36	34	5.99
Four stories	2	.81	2	.62	4	.70
Five stories	4	1.62	....	....	4	.70
Six stories	1	.40	....	....	1	.18
Total	247	100.00	321	100.00	568	100.00

In the three preceding tables the "Frame," "Brick," and "Total" number of buildings used as bakeries, etc., are classified as to height, whether in or outside Milwaukee. There are 185 wooden buildings in Milwaukee and 148 outside that are used as bakeries, confectioneries, etc. Of the former, 49 or 26.49 per cent are one story, 132 or 71.35 per cent two stories, and the remaining 4 are over two stories high. Of the latter, 46 or 31.08 per cent are one story, 102 or 68.92 per cent are two stories high. There are 62 brick buildings in Milwaukee and 173 outside used as bakeries and confectioneries. Of those in Milwaukee, only one is one story in height, 38 or 61.3 per cent are two stories, 17 or 27.42 per cent three stories, and the remainder range from 4 to six stories high. Of the buildings outside Milwaukee, 13 or 7.51 per cent are one story high, 144 or 83.24 per cent two stories high, 14 or 8.09 per cent three stories high, and 2 or 1.16 per cent four stories in height.

The last table is a recapetulation of the two preceding. Over 20 per cent of the bakery buildings in Milwaukee are only one story high, nearly 69 per cent two stories high, and the remainder range from three to six stories in height. Of those outside, nearly one-fifth are only one story high, over three-fifths two stories, and the remainder three and four stories high. For the state, about one-fifth the buildings are one story, three-fourths two story, and the remainder are from three to six story buildings.

BUILDINGS OCCUPIED BY BAKERIES AND CONFECTIONERIES—CLASSIFICATION AS TO KIND OF BUILDINGS.

CLASSIFICATION.	MILWAUKEE.		OUTSIDE MILWAUKEE.		TOTAL.	
	Number.	Per cent.	Number.	Per cent	Number.	Per cent.
Frame, wood	185	74.91	148	64.07	333	58.63
Brick	62	25.09	173	35.93	235	41.37
Total	247	100.00	321	100.00	568	100.00

This table is a summing up of the preceding three. About three-fourths of the bakery buildings in Milwaukee, and over three-fifths in the state outside are frame buildings, the remainder brick.

BUILDINGS OCCUPIED BY BAKERIES AND CONFECTIONERIES CLASSIFIED AS TO HEIGHT.

CLASSIFICATION.	MILWAUKEE.		OUTSIDE MILWAUKEE.		TOTAL.	
	Number.	Per cent.	Number.	Per cent	Number.	Per cent.
Two stories or less	220	90.28	305	95.02	525	92.43
Three or more stories	27	9.72	16	4.98	43	7.57
Total	247	100.00	321	100.00	568	100.00

Over nine-tenths of the bakery buildings in Milwaukee and nineteen-twentieths of those outside are less than three stories high, the remainder, three or more stories high.

BUILDINGS THREE OR MORE STORIES HIGH HAVING TWENTY-FIVE OR MORE PERSONS EMPLOYED THEREIN CLASSIFIED AS TO FIRE ESCAPES AND OUTSIDE STAIRWAYS.

CLASSIFICATION.	MILWAUKEE.		OUTSIDE MILWAUKEE.		TOTAL.	
	Number	Per cent.	Number.	Per cent.	Number	Per cent.
Having fire escapes	6	54.55	5	62.50	11	57.89
Having outside stairways	1	9.09	....	....	1	5.26
Having both	2	18.18	....	....	2	10.53
Having neither	2	18.18	3	37.50	5	26.32
Total	11	100.00	8	100.00	19	100.00

A total of only 14 buildings out of 19 inspected, containing 25 or more employes, have fire escapes or outside stairways, as provided by law.

EXHIBITS SHOWING THE TOTAL NUMBER OF FIRE ESCAPES, OUTSIDE AND INSIDE STAIRWAYS IN BAKERIES AND CONFECTIONERY ESTABLISHMENTS.

CLASSIFICATION.	MILWAUKEE.		OUTSIDE MILWAUKEE.		TOTAL.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
Fire escapes	24	3.09	9	1.46	33	2.37
Outside stairways	199	25.61	182	29.55	381	27.35
Inside stairways	554	71.30	425	68.99	979	70.28
Total	777	100.00	616	100.00	1,393	100.00

In Milwaukee there are 777 fire escapes, outside, and inside stairways in the 247 bakeries inspected. Of this number, nearly three-fourths are inside stairways, one-fourth outside stairways and the remaining 24 fire escapes. In the 321 buildings outside Milwaukee there are 9 fire escapes, 182 outside and 425 inside stairways.

NUMBER OF BUILDINGS HAVING ELEVATORS AND NUMBER OF ELEVATORS USED IN BAKERIES AND CONFECTIONERIES.

CLASSIFICATION.	BUILDINGS.		ELEVATORS.	
	Number.	Per cent.	Number.	Per cent.
Milwaukee	13	46.43	20	55.56
Outside Milwaukee	15	53.57	16	44.44
Total	28	100.00	36	100.00

Of the total number of buildings inspected, 28 have elevators, 13 of this number being in Milwaukee and 15 outside. A total of 36 elevators were inspected, 20 of which are in Milwaukee and 16 outside that city.

KIND OF DOORS USED IN ELEVATORS.

CLASSIFICATION.	MILWAUKEE.		OUTSIDE MILWAUKEE.		TOTAL.	
	Number.	Per cent.	Number	Per cent.	Number	Per cent.
Automatic	9	45.00	6	37.50	15	41.67
Sliding	11	55.00	5	31.25	16	44.44
Not specified	....	....	5	31.25	5	13.89
Total	20	100.00	16	100.00	36	100.00

Nine elevators in Milwaukee and 6 outside have automatic doors, 11 in Milwaukee and 5 outside have sliding doors and 5 outside "not specified."

NUMBER OF DOORS AND EXITS FROM FIRST FLOOR AND BASEMENT OF BAKERIES AND CONFECTIONERIES.

CLASSIFICATION.	FIRST FLOOR.		BASEMENT.	
	Number.	Per cent.	Number.	Per cent.
Milwaukee	238	42.65	206	63.97
Outside Milwaukee	320	57.35	116	36.03
Total	558	100.00	322	100.00

The inspector found a total of 558 doors and exits from first floors, and 322 from basements. Of the former, 238 or 42.65 per cent, and 206 or 63.97 per cent of the latter, are in Milwaukee.

NUMBER OF BASEMENTS USED IN BAKERIES AND CONFECTIONERIES CLASSIFIED ACCORDING TO NUMBER OF OUTSIDE ENTRANCES.*

CLASSIFICATION.	MILWAUKEE.		OUTSIDE MILWAUKEE.		TOTAL.	
	Number.	Per cent	Number.	Per cent.	Number.	Per cent.
No outside entrance	29	14.07	25	21.55	54	16.77
One outside entrance	105	50.97	72	62.07	177	54.97
Two outside entrances	72	34.96	17	14.66	89	27.64
Three outside entrances	....	....	1	.86	1	.31
Four outside entrances	....	....	1	.86	1	.31
Total	206	100.00	116	100.00	322	100.00

*The doors to all but seven outside entrances to basements swing "in." These seven were found in the city of Milwaukee.

Fourteen per cent of the basements in Milwaukee, and 21.55 per cent of those outside have no outside entrance. Over one-half those in Milwaukee and 62 per cent of those outside have each one outside entrance, and the remainder have two or more.

NUMBER OF FIRST FLOORS OCCUPIED BY BAKERIES AND CONFECTIONERIES CLASSIFIED AS TO THE NUMBER OF OUTSIDE DOORS.*

CLASSIFICATION.	MILWAUKEE.		OUTSIDE MILWAUKEE.		TOTAL.	
	Per cent	Number.	Per cent.	Number.	Per cent.	Number.
One outside door	3	1.26	11	3.43	14	2.51
Two outside doors	130	54.62	170	53.13	300	53.76
Three outside doors	69	28.99	80	25.00	149	26.70
Four outside doors	25	10.50	47	14.69	72	12.90
Five outside doors	7	2.94	8	2.50	15	2.69
Six or more outside doors†	4	1.68	4	1.25	8	1.44
Total‡	238	100.00	320	100.00	558	100.00

*All doors "swing in" except two found in one establishment in the city of Racine; these "swing out."

†One establishment in "Milwaukee" had eleven doors, one "outside Milwaukee" had eight doors.

‡In ten establishments the first floors of the buildings are not occupied.

In the above table the first floors used as bakeries, etc., are classified as to number of outside doors and exits. Over one-half of these in both Milwaukee and the state outside have two outside doors each, over one-fourth have three, and one-tenth in Milwaukee and one-seventh outside have four each.

BAKERY AND CONFECTIONERY ESTABLISHMENTS CLASSIFIED AS TO SANITARY CONDITIONS OF ROOMS OCCUPIED.

CLASSIFICATION.	MILWAUKEE.		OUTSIDE MILWAUKEE.		TOTAL.	
	Number.	Per cent.	Number.	Per cent.	Number	Per cent.
In good condition	209	84.62	246	76.64	455	80.11
In bad condition	38	15.38	73	22.74	111	19.54
Not specified	....	....	2	.62	2	.35
Total	247	100.00	321	100.00	568	100.00

As shown in the above table, the inspector reported that he found 209 or 84.62 per cent of the 247 bakeries in Milwaukee in fairly good condition and the remainder in bad condition, while of the 321 outside, he found 246 or 76.64 per cent in good condition and 73 or 22.74 per cent in bad condition. This means that about one establishment out of every five was not a fit place for the manufacture of bread and other food products previous to being visited by the inspector.

BAKERY AND CONFECTIONERY ESTABLISHMENTS CLASSIFIED ACCORDING TO FREQUENCY OF PAINTING OR WHITEWASHING INTERIOR.

CLASSIFICATION.	MILWAUKEE.		OUTSIDE MILWAUKEE.		TOTAL.	
	Number.	Per cent	Number.	Per cent.	Number.	Per cent.
Every three months	4	1.62	4	1.25	8	1.41
Every four months	9	3.64	4	1.25	13	2.29
Every six months	105	42.51	92	28.66	197	34.68
Once every year	61	24.70	59	18.38	120	21.13
Once every two years	....	....	2	.62	2	.35
Not specified	68	27.53	160	49.84	228	40.14
Total	247	100.00	321	100.00	568	100.00

The law requires that bakeries shall be whitewashed at least once every six months. The above exhibit shows how nearly the bakeries of the state have maintained this standard. Less than two out of every five have fulfilled the requirements of the law. Of those reporting, 122 did not whitewash or paint oftener than once a year. Orders were issued to the proprietors of these establishments to comply with the law.

BAKERY AND CONFECTIONERY ESTABLISHMENTS CLASSIFIED AS TO SANITARY CONDITION OF UTENSILS.

CLASSIFCATION.	MILWAUKEE.		OUTSIDE MILWAUKEE.		Total.	
	Number.	Per cent.	Number.	Per cent	Number.	Per cent.
Good	239	96.76	300	93.46	539	94.89
Bad	8	3.24	19	5.92	27	4.76
Not specified	....	....	2	62	2	.35
Total	247	100.00	321	100.00	568	100.00

A much larger percentage of the utensils were in a good sanitary condition than the buildings themselves. Nearly 95 per cent of the establishments used clean utensils.

BAKERY AND CONFECTIONERY ESTABLISHMENTS CLASSIFIED AS TO KIND OF FLOORS, WHETHER WOOD, CEMENT, BRICK, ETC.

CLASSIFICATION.	MILWAUKEE.		OUTSIDE MILWAUKEE.		TOTAL.	
	Number.	Per cent	Number.	Per cent.	Number	Per cent
Wood	218	88.26	285	88.79	503	88.56
Cement	28	11.34	27	8.41	55	9.68
Wood and cement	1	.40	....	....	1	.18
Brick	....	....	7	2.18	7	1.23
Not specified	....	....	2	62	2	.35
Total	247	100.00	321	100.00	568	100.00

An average of 88.56 per cent of the establishments inspected had wood floors, less than 10 per cent cement, and the remainder had either wood and cement, or brick.

BAKERY AND CONFECTIONERY ESTABLISHMENTS HAVING INSIDE CLOSETS CLASSIFIED ACCORDING TO NUMBER USED.

CLASSIFICATION.	MILWAUKEE.		OUTSIDE MILWAUKEE.		TOTAL.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
One closet	69	33.17	83	69.17	152	46.34
Two closets	89	42.79	26	21.67	115	35.06
Three closets	38	18.27	7	5.82	45	13.72
Four closets	7	3.37	2	1.67	9	2.74
Five or more closets*	5	2.40	2	1.67	7	2.14
Total	208	100.00	120	100.00	328	100.00

*One establishment "outside Milwaukee" has six inside closets and one has seven. One establishment in "Milwaukee" has 12, two 13, and one 15 inside closets.

Nearly all the bakery establishments inspected, in Milwaukee, have inside closets, while but little more than one-third those outside are so provided. Of those inside Milwaukee, one-third have one closet each, over two-fifths have two closets each, about one-fifth have three each, and the remainder have from four to fifteen each. Of those establishments having inside closets in the state outside Milwaukee, 69.17 per cent have one each, 21.67 per cent have two each, and the remaining 10 per cent have from three to six each.

BAKERY AND CONFECTIONERY ESTABLISHMENTS HAVING OUTSIDE CLOSETS CLASSIFIED AS TO NUMBER USED.

CLASSIFICATION.	MILWAUKEE.		OUTSIDE MILWAUKEE.		TOTAL.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
One closet*	43	93.48	202	96.55	245	96.08
Two closets	3	6.52	7	3.45	10	3.92
Total	46	100.00	209	100.00	255	100.00

*Seven establishments "in Milwaukee" and seven "outside Milwaukee" have each one outside and one inside closet.

The above is a classification of those establishments having outside closets. About one-sixth of those in Milwaukee and nearly two-thirds of those outside, have outside closets, and less than four per cent the establishments in the state having outside closets have more than one; and none have more than two.

BAKERY AND CONFECTIONERY ESTABLISHMENTS CLASSIFIED AS TO NUMBER OF WATER CLOSETS.

CLASSIFICATION.	MILWAUKEE.		OUTSIDE MILWAUKEE.		TOTAL.	
	Number.	Per cent,	Number.	Per cent.	Number.	Per cent
One closet	100	40.48	270	84.11	370	65.14
Two closets*	94	38.06	39	12.15	133	23.41
Three closets	40	16.20	9	2.80	49	8.63
Four closets	7	2.83	1	.31	8	1.41
Five or more closets†	6	2.43	2	.63	8	1.41
Total	247	100.00	321	100.00	568	100.00

*Seven establishments "in Milwaukee" and seven "outside Milwaukee" have each an outside and an inside closet.

†One establishment has 12 closets, two establishments have thirteen and one has 15 closets "in Milwaukee;" one establishment has 6, and one 7 closets "outside Milwaukee."

The establishments are here classified as to the total number of closets each has whether inside or outside. Of the 247 bakeries in Milwaukee, 100 or 40.48 per cent have each one closet, 94 or 38.06 per cent have each two, 40 or 16.2 per cent have three, and the remainder four or more each. Outside Milwaukee, 270 or 84.11 per cent of the 321 establishments have each one closet, 39 or 12.15 per cent have two each, and the remainder three or more each.

ESTABLISHMENTS CLASSIFIED AS TO TIME AND KIND OF WAGE PAYMENTS.

Classification.	Number.	Per cent.
Weekly, cash	446	78.52
Semi-monthly, cash	2	.35
Monthly, cash	2	.35
Not specified	1	.18
Not employing wage earners	117	20.60
Total	568	100.00

This table means that about four establishments out of every five pay employes weekly cash wages, and the following table shows that more than 99 out of every 100 employes receive weekly wages in cash.

EMPLOYES, INCLUDING CHILDREN, CLASSIFIED AS TO TIME AND KIND OF WAGE PAYMENTS.

Classification.	Number.	Per cent.
Weekly, cash	4,099	99.20
Semi-monthly, cash	27	.65
Monthly, cash	4	.10
Not specified	2	.05
Total	4,132	100.00

EMPLOYES CLASSIFIED AS TO SEX WITH PERCENTAGES OF MALE, FEMALE AND TOTAL WORKING IN MILWAUKEE AND OUTSIDE MILWAUKEE.

CLASSIFICATION.	NUMBER.			PER CENT.		
	Male.	Female.	Total.	Male	Female	Total.
Milwaukee	1,107	1,003	2,110	58.36	57.98	58.17
Outside Milwaukee	790	727	1,517	41.64	42.02	41.83
Total	1,897	1,730	3,627	100.00	100.00	100.00

This table means that 58.36 per cent of the total number of males, 57.98 per cent of the females, and 58.17 per cent of the total number of employes, are employed in Milwaukee, and the remainder in the establishments outside that city.

CHILDREN UNDER 16 YEARS OF AGE CLASSIFIED ACCORDING TO THE NUMBER OF HOURS LABOR PER DAY.

CLASSIFICATION.	MILWAUKEE.		OUTSIDE MILWAUKEE.		TOTAL.	
	Number.	Per cent.	Number	Per cent.	Number.	Per cent.
Nine hours	2	.52	....	....	2	.40
Ten hours	379	98.70	118	97.52	497	98.41
Eleven hours	1	.26	....	....	1	.20
Twelve hours	2	.52	3	2.48	5	.99
Total	384	100.00	121	100.00	505	100.00

This table shows that nearly all the children employed in these establishments are required to work 10 hours per day. Only two work less, and six are required to work more, which is a violation of the law.

TOTAL NUMBER EMPLOYES CLASSIFIED ACCORDING TO NUMBER OF HOURS LABOR PER DAY.

CLASSIFICATION.	MILWAUKEE.		OUTSIDE MILWAUKEE.		TOTAL.	
	Number.	Per cent	Number.	Per cent	Number.	Per cent.
Seven hours	3	.14	32	2.11	35	.96
Eight hours	15	.71	50	3.30	65	1.79
Nine hours	142	6.73	40	2.64	182	5.02
Ten hours	1,781	84.41	1,225	80.75	3,006	82.88
Eleven hours	89	4.22	55	3.62	144	3.97
Twelve hours or more	80	3.79	114	7.51	194	5.38
Total	2,110	100.00	1,517	100.00	3,627	100.00

In the bakery and confectionery establishments of Milwaukee, 84.41 per cent of the employes are required to work ten hours per day, 4.22 per cent eleven hours, 3.79 per cent twelve or more hours, the remainder nine hours or less.

MALE EMPLOYES CLASSIFIED ACCORDING TO THE NUMBER OF HOURS LABOR PER DAY.

CLASSIFICATION.	MILWAUKEE.		OUTSIDE MILWAUKEE.		TOTAL.	
	Number.	Per cent	Number.	Per cent	Number.	Per cent.
Seven hours or less	2	.18	13	1.67	15	.79
Eight hours	5	.45	28	3.54	33	1.74
Nine hours	50	4.52	30	3.79	80	4.22
Ten hours	919	83.02	595	75.31	1,514	79.81
Eleven hours	64	5.78	42	5.31	106	5.59
Twelve hours or more	67	5.95	82	10.38	148	7.85
Total	1,107	100.00	790	100.00	1,897	100.00

FEMALE EMPLOYES CLASSIFIED ACCORDING TO THE NUMBER OF HOURS LABOR PER DAY.

CLASSIFICATION.	MILWAUKEE.		OUTSIDE MILWAUKEE.		TOTAL.	
	Number.	Per cent.	Number.	Per cent	Number.	Per cent.
Seven hours or more	1	.10	19	1.80	20	1.15
Eight hours	10	1.00	22	3.03	32	1.85
Nine hours	92	9.17	10	1.38	102	5.90
Ten hours	862	85.94	630	86.66	1,492	86.24
Eleven hours	25	2.49	13	1.79	38	2.20
Twelve hours or more	13	1.30	33	4.54	46	2.66
Total	1,003	100.00	727	100.00	1,730	100.00

The above two tables show that about 5 per cent of the male, and 10 per cent of the female employes in the bakeries of Milwaukee are required to work 9 or less hours per day, 83.02 per cent of the male, and 85.94 per cent of the female employes work 10 hours, and 11.73 per cent of the male, and 3.79 per cent of the female work 11 or more hours per day. Outside Milwaukee 6.70 of the male, and 8.90 per cent of the female employes work 9 hours or less per day, 75.31 per cent of the male, and 86.66 per cent of the female work 10 hours, and the remaining 15.69 per cent of the male and 6.33 per cent of the female employes work 11 or more hours per day.

BAKERY AND CONFECTIONERY ESTABLISHMENTS CLASSIFIED ACCORDING TO NUMBER HOURS LABOR REQUIRED OF EMPLOYES.

CLASSIFICATION.	MILWAUKEE.		OUTSIDE MILWAUKEE.		TOTAL.	
	Number.	Per cent.	Number.	Per cent	Number.	Per cent.
Seven hours or less	5	1.23	32	9.96	37	6.51
Eight hours	12	4.86	36	11.22	48	8.45
Nine hours	15	6.07	14	4.36	29	5.11
Ten hours	140	56.68	171	53.27	311	54.75
Eleven hours	36	14.57	28	8.72	64	11.27
Twelve hours or more	39	15.79	40	12.47	79	13.91
Total	247	100.00	321	100.00	568	100.00

Of the total number of establishments in Milwaukee, 32 or 12.16 per cent require 9 or less hours for a day's work, 140 or 56.68 per cent require 10 hours, and 75 or 30.36 per cent require 11 or more hours, while of those outside, 82 or 25.54 per cent require 9 or less hours, 171 or 53.27 per cent 10 hours and 68 or 21.19 per cent 11 or more hours per day.

EXHIBIT GIVING NAME AND LOCATION OF BAKERY AND CONFECTIONERY ESTABLISMENTS HAVING STEAM POWER, SHOWING WHETHER BOILERS ARE INSURED AND NUMBER YEARS EXPERIENCE OF ENGINEER.

Name and Location of Firm.	Boilers.			Years experience of engineer.
	Number.	Total horse power.	Insured.	
KENOSHA—				
Kupper Cracker Co.	1	20	no	15
LA CROSSE—				
Funke, J. B., Co.	1	75	yes	10
La Crosse Cracker & Candy Co.	1	40	no	20
MILWAUKEE—				
Ambrosia Chocolate Co.	1	40	yes	9
American Candy Co.	2	150	yes	20
Carpenter & Skiles	1	60	yes	7
Johnston, Robt. A., & Co.	2	100	yes	30
Kraemer, G.	1	10		5
Loranz Bros.	1	75	yes	21
National Biscuit Co.	2	75	yes	20
Pflugart Co.	1	50	yes	10
Ziegler, Geo., & Co.	3	300	yes	20
RACINE—				
Bettry, Mrs. G.	1	12		20
STEVENS POINT—				
Bennett, D.	1	6	yes	20
Total	19	1,013		227
Average	1.36	72.36		16.21

This table gives the name and location of establishments using steam power. Fourteen establishments use steam with a total horse power of 1,013. This is an average of 1.36 boilers or 72.36 horse power to the establishment. Of the 19 boilers used, 15 were insured, two were not and two were not specified as to insurance. The number of years experience of engineers ranges from 5 to 30 years, with an average of 16.21 years each.

NUMBER OF ORDERS ISSUED FROM JUNE 30, 1903, TO JUNE 30, 1904, ALL OF WHICH WERE COMPLIED WITH.

Classification.	Orders Issued.	
	Number.	Per cent.
Whitewashing	138	34.33
Sanitation	109	27.11
Painting	75	18.65
New floor	23	5.72
New ceiling	10	2.49
Papering	7	1.74
Guard machinery	5	1.24
Plastering	4	1.00
Clean furniture	3	.74
New trough	2	.50
Guard on elevator	2	.50
Clean clothes for workmen	2	.50
Toilet facilities	2	.50
New side walls	2	.50
New sink	2	.50
Shop removed from basement	2	.50
Other orders	14	3.48
Total	402	100.00

This table shows in what respects the bakery law was violated. Perhaps it would be more to the point to say that this table reveals the practices of bakers and confectioners which lead to the adoption of the law. The inspector issued a total of 402 orders. Of this number 138 or 34.33 per cent related to whitewashing, 109 or 27.11 per cent to sanitary conditions in general, 75 or 18.65 per cent to painting, 23 or 5.72 per cent to floors, and 10 or 2.49 per cent to ceilings. Others related to plastering, clothing, sinks, walls, papering, etc. All orders were complied with.

SOME ECONOMIC ASPECTS OF FACTORY LEGISLATION.

Factory legislation, like every other form of government control, has met with resistance more or less stubborn, at every step of its progress since 1802. Any interference with the freedom of contract on the part of the government between private individuals, or between a private individual on the one hand, and a corporation on the other, was considered an "intolerable infringement of personal liberty." A law which placed any restrictions upon a laborer willing to sell his work on terms agreeable to himself and his employer was considered as denying him the right to work, and therefore the right to live. Any law which restricted free competition, whether in the sale of labor or of commodities was considered worse than useless. This view was entertained by the highest economic authority of the time. Adam Smith advanced the idea that "the patrimony of the poor man lies in the strength and dexterity of his hands; and to hinder him from employing this strength and dexterity in whatever manner he thinks proper, without injury to his neighbor, is a plain violation of this most sacred property. It is a manifest encroachment upon the just liberty both of the workingman and those who might be disposed to employ him." That is to say, any interference on the part of the government, tending to restrict a man's freedom of action in working, employing labor, buying or selling goods, or any other act, which does not interfere with a fellowman's rights, is an interference with man's "natural liberty." "The right of every man to employ the capital he inherits," or has earned through his "exceptional talent, expensive education, and the fruits of past saving * * * without molestation" constitutes one of the highest privileges of a constitutional form of government. This was the principal stumbling-block in the way of factory legislation during the closing years of the eighteenth century and the first half of the nineteenth century.

Another influence which ran parallel with the above idea and a corallary to it was the doctrine that the evils incident to factory life were due to "mistaken ideas of civilization;" that the natural development of the human race had become distorted, and twisted out of its natural course; that man should get back to more primitive ways of living, nearer "a state of nature" and start again the true life of the race; that any force or artificial contrivance which turned men's actions into other than natural channels was unwise and should not be tolerated. This doctrine pushed to a successful conclusion meant the destruction of all modern instruments of war, all the great machines of production and transportation heretofore invented, and a return to the dug-out as the abode of man, a return to the club as the only implement of war or of the chase, to the naked hand as the only instrument of production, and the log floating down the stream as the only means of transportation. Such doctrines found lodgement, not only in the minds of the great thinkers of the age, but in the minds of men who earned a livelihood working for wages. Every new "labor saving machine" was looked upon by them as an additional instrument for depriving the laborer of the right to earn his living by the "strength and dexterity of his hands," and hence of "the right to live."

These ideas were given a greater momentum by the rise of a school of economists which continued to promulgate and add to them. The main object of Adam Smith's *Wealth of Nations* was said to be "to demonstrate that the most effectual plan for advancing a people to greatness is to maintain that order of things which nature has pointed out, by allowing every man, as long as he observes the rules of justice, to pursue his own interests in his own way, and to bring both his industry and his capital into the fiercest competition wth those of his fellow citizens." But probably the greatest influence exercised by the writings of that man and his successors was not so much in pointing out the injustice of controlling men's actions, as in filling the public mind with the belief that there were natural laws which made all such control incapable of reaching the end in view. As an illustration, Ricardo advanced the theory that wages always tended to the amount "necessary to enable the laborer to subsist, and to perpetuate his race without either increase or diminution," and that it was impossible to raise or lower them by artificial means. He claimed, also, to have found a natural law governing rent; that rent arose from a difference in the quality of the land arrived at by comparing the amount the better portions would produce with that produced on the poorest land that just paid for being cultivated; that rent was independent of any human conrol. Another illustration is the law developed by Malthus, that population tends to increase in a geometrical ratio while the means of subsistence, on the other hand, tends to increase only in an arithmetical ratio. Still another was the old wage found theory that wages were determined by using the amount of capital as a dividend, and the number of wage-earners as a divisor, the quotient being the wages. To increase wages, meant to decrease the number of wage earners, or to increase the amount of capital, or both. As a result wage-earners would organize in such a way as to monopolize the labor market and keep the supply as low as possible.

It was during the time that the economic doctrines propounded by these great men had taken almost universal posession of the minds of our statesmen that factory legislation began its struggle for existence. It was during the period of the great industrial revolution when machines run by hand were giving way to those operated by steam and water power; when the power loom replaced the hand loom; the spinning-jenny ushered out the spinning-wheel; the cotton gin relieved the labor of many hands, and factories, rather than homes of workmen became the centers of production. Factories sprang up on every hand. Home laborers no longer able to compete with the factories gave up home production, and masters as well as journeymen, men as well as women, children, old and young, all entered the factories and became common laborers under worse conditions as to wages, hours of labor and sanitation than can be adequately described in words. As time went on conditions grew worse and it became more and more apparent that some form of regulation was necessary. But how any regulation of wages, sanitary conditions, or hours of labor could be made without encroaching upon the "natural rights" of men was a mystery the statesmen of the day were unable to solve.

Not only this, but there was a rapid decay of all forms of whatever legal regulation had been previously in vogue. The statute of Apprentices was diregarded. The Assize of bread was not enforced. The Combination laws allowing laborers to combine for higher wages were repealed. Import tariffs and all other Navigation laws became either dead letters upon the statute books or were repealed. In fact almost every law which tended to control the commercial actions of private individuals were either taken off the statute books or were no longer enforced by the government. Yet all the while new systems of industry were springing up, and old ones continued to grow and multiply. Manufacturers were at liberty to hire whom they pleased and to discharge their workmen without a moments notice. They could manufacture whatever article of commerce they desired and could ship it to whatever place offering the greatest net returns. Laborers could terminate their engagements with employers whenever they pleased and travel wherever they desired in quest of work. The manufacture and sale of commodities increased day by day and year by year, and prices became lower and lower. England was rapidly growing in wealth and was fast becoming supreme in the world of manufacture and commerce, and in material resources stood first in the column of nations.

Yet the results were unsatisfactory. The period of transition from the old to the new had brought more poverty and misery upon England than was ever known before. Those who were wedded to the old way of hand manufacture had neither the capital, enterprise nor the physical and mental ability to adapt themselves to the new. Fuel being scarce (for coal was not then used as fuel) factories were built up along the streams in the north of England away from the densely populated districts and laborers were not inclined to follow them away from their established homes. As a result homeless and pauper children, five and six years of age and over, were transferred in vast hordes from London and other large and congested towns to the factories and compelled to work as long as seventeen hours per day and were housed in barracks of almost every description, surrounded by the most filthy conditions imaginable. Appeals were made to Parliament. Commissions were appointed to investigate and report, all telling the same story of "the sad life of these little waifs, overworked, underfed, neglected, abused, in the factories and barracks in the remote glens" of England. Owners of factories themselves began urging some means of arresting the evils surrounding factory life which threatened the very life of the English race. But it was not until Dr. Percival (called "the pioneer of sanitary reform"), at the invitation of the Justice of the Peace of Manchester, made an investigation as to the cause of a serious epidemic raging in factory districts that any legal steps were taken which gave promise of relief. He reported that in his opinion the chief cause contributing to the disease was the "confinement and exhaustion" caused by the long hours of labor and the hard work imposed. Following his investigations county magistrates, one after another, took steps toward prohibiting children from working at night or for more than ten hours per day. Finally Parliament, in 1802, condescended to pass a law placing the age limit at nine years, below which children "bound out" could not work in factories. The reason given for passing this law was that such children were not "free agents" and had no "natural rights." The only importance to be attached to this law is that it may be called the entering wedge of factory legislation. It did not perceptibly check the evils pointed out by Dr. Percival in his report to the Manchester magistrates but it is important as a step taken in the right direction.

Matters went from bad to worse except in a few instances where employers of labor took it upon themselves to rid their factories of existing evils. England, with all her wealth, was producing a race of degenerates. The ratio of children to adults, and of females to males increased from year to year until in 1838 there were found employed in the worsted mills of England 32,000 people, and out of this number there were only 3,000 adult males, 10,000 adult females, and about 19,000 children. In the flax-spinning industry, only one out of every nine were adult males, while two out of nine were adult females, and six out of nine were children. Exact statistics are not to be had in any of the other numerous industries, yet similar conditions prevailed throughout Great Britain.

Boards of health continued their investigations. They published their findings in pamphlet form and scattered them broadcast. Public sentiment became aroused and Parliament continued to appoint its "commissions to investigate and report their findings." Report after report was made all telling of the horrors of the laboring classes, whether children or adults, yet the doctrine of "non-interference" had so thoroughly taken root in the minds of members of Parliament that they could see no way to legislate against such evils. It was urged in Parliament that evidences drawn from observation may "justify the actions of a practical man," but they might not be scientifically conclusive. It was thought that low wages, long hours, unsanitary conditions, and the unsafe machinery of unregulated factories, might be merely coincidences. Therefor in order to fix the responsibility of existing conditions, the fact must be established that "individual bargaining" brings about the lowering of the price of labor "below the level of efficient citizenship."

But little reflection is necessary to convince one of the great disadvantage the individual laborer is at in bargaining with the capitalist. He can either accept the wages offered or let them alone. If the capitalist experiences any inconvenience, by his terms not being accepted, he has only to speed up his machinery or work longer hours. His income will pour in with the same regularity as before. The income of the laborer on the other hand is entirely cut off while his rent and other expenses continue to accumulate until he is finally forced to come to whatever terms are offered. Over such questions as sanitary conditions and safety of machinery he has no voice in the bargaining at all. He must sell his life (for his labor is his life) to be used under whatever conditions may be imposed upon him and at whatever price may be offered. This will be true under even normal conditions, when there are no more laborers to be had than there is work to do. Imagine what it will be when there are hundreds of workmen crowding around the factory gate where but a single "job" is to be obtained.

It is sometimes argued that it is better to rely on the benevolence of employers to right these wrongs than to impose legal interference. But not all employers have this benevolent disposition, nor are the few that have such inclinations free to carry them into effect any more than the laborer is free to refuse the bad conditions to which he is subjected. Every manufacturer must sell his goods in competition with every other manufacturer, and must therefore keep his expenses down to the lowest level. So whatever may be the practice of one, must also be the practice of all, unless he be protected by some form of monopoly or trust.

It is maintained by others that this problem will be solved by "consumers' leagues" and other allied societies formed to boycott firms manufacturing cheap articles through the payment of low wages and working long hours under unsanitary conditions. The good intentions of these societies are to be commended, but economic authorities maintain that they are impractical looked at from any point of view, and that they utterly fail to cope with the evil. In the first place it is almost impossible to trace an article from the retail counter back to the place where it was produced. Nor is the price of an article any index to the conditions under which it was made. Sometimes the most costly broadcloths are produced in the worst dens of filth and disease, where wages are merely nominal, and the hours of labor long and cruel. But even if cheapness is a criterion to go by, it does not follow that the retailer will pass the extra amount he may receive for his wares on to the manufacturer, and he in turn to his employes. But suppose cheapness indicates the conditions surrounding the manufacture of an article, the customer must often choose between taking the article, and going without it, for the very fact that the article was produced at a nominal cost, through the cheapness of labor and the length of the hours, may drive all competition out of the field and leave such shops free to place their goods upon the market, while the better factories will have to seek new fields of operation. More than this, these shops produce their wares for export trade, and for a "consumers' league" to be effective it must include consumers of foreign countries, civilized as well as uncivilized, which is not at all practical.

It would seem, then, that the idea of leaving the subject of "sweating" to the benevolence of employers, or to the work of societies whose individual members have neither the time nor, in a measure at least, the inclination to look into the history of articles placed upon the market, some other means must be employed to reduce to a minimum the physical and mental degradation to which a great body of our workers are subjected. There must be enforced upon "all employers a minimum of humane order as the inviolable starting-point of competition."

But the statesman who is entrusted with the power to make laws, and who is capable of taking a broader view of the subject than has thus far been taken, will want additional evidence before proceeding. He will understand that legal regulation from the point of view of the individual is a commendable thing, but he will want it demonstrated from a national point of view. He will ask whether a regulated industry is not less economical than one not regulated, and if so, will not the imposition of any regulations tend to destroy trade between nations. In other words, if the cheapness of labor and the long hours imposed is advantageous to the individual employer, will not the general extension of this system be advantageous to the nation?

It has already been briefly pointed out that the hours of labor in England were so long as to be almost ceaseless; that wages were so low that laborers could barely subsist and perpetuate their race; that the sanitary conditions surrounding them were such as to endanger their health and make them a burden to themselves, their families and their employers, and to the public in general. But this may not concern the employer. All he may care for, perhaps, is that his workmen remain able to perform their tasks for a few months or, at most, a few years, to be worn out and passed on to becme objects of charity and fill paupers' graves, while their places will be filled with other victims and the process repeated. This may be an immediate gain to the individual employer, but when the public comes back at him for a compulsory contribution to support the race of degenerates and paupers he is helping to produce and perpetuate, his gain is materially lessened and the national wealth which is stored away in labor is being slowly but surely undermined and destroyed.

This will not do. No private individual has any more moral right to enrich himself by drawing upon the national wealth in this way than he has to fill his pockets directly out of the national treasury without giving anything in return. No private individual has any more moral right to exhaust the working energy and working capital of a nation without giving "value received" than he has to take the life of an employe outright. The only difference is that one is a slower criminal process than the other. It is not enough that workmen should obtain barely enough for their labor to enable them to live, but they should receive a competency. They should receive as much energy from their employers in food, clothing, homes and furnishings amid healthful surroundings as they give to their employers in the articles they produce. Not until this is done will labor be able to perpetuate itself and assume that lofty position where it will be recognized as the very foundation of modern civilization. When this is done, one of the greatest barriers in the way of moral and intellectual strength and as a result, material wealth, will be removed. The stronger, healthier and more intelligent a laborer is, the more wealth he represents. The laborers of a nation represent its working capital just as the hands of the farmer, his horse or his ox represent his working capital. And the stronger and healthier either may be, the more capital it represents. The more efficient this capital becomes, the more wealth will be produced. Machinery operators represent the working capital of the manufacturer, and he owes it to the nation which protects him in his business to do everything in his power to increase this working capital and keep it in the highest possible state of efficiency, just as much as he owes it to himself to increase his own capital by keeping his machinery up-to-date and in good repair. If his own selfish interests so blinds him to this fact, the state should step in and place such restrictions upon him as will compel a just recognition of its rights. A machine that will barely pay for operating, should be discarded. It not only retards progress, but becomes a drain upon the wealth of its owner. What is true of a poor machine is true of a workman whose energies have been exhausted by overwork. More is taken away from him from day to day than is restored to him, and he becomes a parasite upon his fellow laborers. A community of such laborers becomes a parasitic community, and a state built upon this class of laborers, becomes a parasitic state, and degeneracy takes the place of progress.

The same is true with child labor. Take the parent who hires his child out to work for a nominal wage. The child becomes a parasite upon the family, the family upon the community, and the community, in turn, upon the state. But suppose the child receives more than nominal wages. Suppose it receives enough to cover the cost of living. The process is not changed if the child is to be discharged as soon as is becomes an adult and another child is to be engaged in its place. The employment of women is no exception to the rule. Children who are employed to be discharged as soon as they become adults, women who are employed until they become heads of households, all take places which would otherwise be occupied by men who, if it were not for this cheap class of workers and the uncertainties it produces in the field of labor in general, would otherwise take up some particular lines of work and make them their life occupation, enabling them to become more skilled day after day the longer they are permitted to follow their chosen profession. A man thus occupied would be able to lay up more for himself and family for a rainy day, to add more to the wealth of his employer and to the state, than if compelled to divide his work with his children. By such division neither he nor his children will ever attain that high degree of skill so necessary in the field of competition.

It is the man who through long and continued training has acquired great skill that will successfully compete with foreign or other cheap labor, and not the man who will never attain the highest skill so long as he is continually being replaced by others, before he has had time to acquire any skill. Wherever children are most extensively employed, wages of both children and adults do not come anywhere near the mark that is reached where there is the least child labor. An examination of the statistics bearing upon this subject in the United States will show the truth of this statement. The following table is made up from statistics taken from the 12th U. S. Census bearing upon this subject in the twenty states employing the greatest number of children in manufacturing establishments and workshops. In the first column is given the age below which children were not allowed to work in factories and workshops in the year 1900. The second column gives the rank of the state, ranked according to the number of children employed; the third, the average yearly earnings of children under 16 years of age; the fourth, the average yearly earnings of adults over 16; and the last column gives the percentage of children to the total number employed in factories and workshops for the same year.

TABLE I.—ALL INDUSTRIES.

State.	Age required for working in factories and workshops in 1900.	Rank in number of children employed in factories, etc.	Average yearly earnings of children under 16 years of age employed in factories, etc.	Average yearly earnings of persons over 16 years of age employed in factories, etc.	Per cent. of children to total number employed.
Pennsylvania	13 years	1	$160	$466	4.52
New York	14 years during school: 12 years during vacation	2	167	487	1.55
Massachusetts	14 years	3	195	466	2.52
Illinois	14 years	4	181	493	2.63
North Carolina	No limit	5	96	214	14.70
South Carolina	No limit	6	99	218	17.78
New Jersey	12 years for boys; 14 y'rs for girls	7	167	466	3.33
Georgia	No limit	8	109	253	7.60
Maryland	12 years	9	147	378	5.43
Wisconsin *	14 years during school: 12 years during vacation	10	155	422	4.00
Rhode Island	12 years, but between 12-14 years child must attend school 80 days	11	181	429	5.09
Missouri	14 years	12	168	459	3.34
Ohio	14 years, except in sch'l vacation	13	162	449	1.27
Virginia	No limit	14	106	321	5.73
Indiana	14 years	15	166	435	2.36
Connecticut †	14 years, except during school vacation	16	192	474	1.97
Alabama	No limit	17	102	299	6.57
Kentucky	No limit	18	122	367	4.27
Michigan	12 years	19	149	413	1.62
Maine	12 years	20	140	389	2.94

* The law permitted children between 12 and 14 years of age, whose widowed mother needed their support, to work in factories, workshops, etc., at any time. This lead to abuses of the law by persons granting permits for fees.

† Illiterates under 16 must attend public evening school 20 nights per month.

With but slight variations, both children and adults receive the highest annual wages in states having the highest age for children to work in factories, and wherever regulation is the least a greater portion of children to adults are employed and the lowest annual wages paid.

In 1900, North Carolina, South Carolina, Georgia, Virginia, Alabama and Kentucky had no legal age limit under which children could not work in factories. In these states the average yearly earnings for children varied from $96 in North Carolina, to $122 in Kentucky. While in the same states the average yearlv earnings of adults varied from $214 in North Carolina, to $367 in Kentucky, and in every state having some restrictions as to child labor in factories the average yearly earnings of both children and adults were higher than in the states having no restrictions.

In all the states having an age restriction as to factory work twelve years appears to be the minimum. The states having the twelve year limit in 1900 were Michigan, Maryland and Maine. To these may be added Wisconsin,[*] because the law permitted children of widowed mothers, who needed their support, to work in factories at any time if they were over twelve years of age; and it was almost a universal practice for Justices of the Peace and Notarys Public who had authority to grant these permits and who received twenty-five cents for each permit given, to give them to all who asked for them under the pretext of "needed support." Some of these officials even went so far as to *advertise that they would* grant permits to children between 12 and 14 providing their earnings were necessary for the support of the family. So it may be said that the states requiring children to be twelve years of age before they can work in factories are Michigan, Maryland, Wisconsin and Maine. In each of these states the average yearly earnings of both children and adults were higher than in the six states having no age limit, varying in the case of children from $140 in Maine, to $155 in Wisconsin, and for adults from $378 in Maryland, to $422 in Wisconsin. In every state having an age limit of thirteen or fourteen years for factory work the wages of both children and adults were higher in each instance than in either of the above groups,[†] varying for children from $160 per year in Pennsylvania, to $195 in Massachusetts, and from $429 in Rhode Island, to $493 in Illinois for adults. Besides this, the table reveals the fact that one adult and three children could earn but a few dollars more where the percentage of child labor is greatest than a single adult can earn in the state of Illinois. Two adults and one child could earn but little more in North Carolina than one adult could earn in Illinois. This is not all. The average earning power of each laborer in the six states having no regulation as to child labor is about $700 per year. In the four states requiring children who work in factories to be twelve years of age, the average earning power per laborer is $900, while in the remaining ten states where the regulations as to age were still greater the average earning ability of each laborer is about $1,100 per year, a difference in each instance of about $200. This result is obtained by subtracting the total cost of material from the total value of products and dividing the remainder by the total number of wage earners. This gives a quotient which answers the purpose for which it is used, namely, as evidence tending to prove that the employment of cheap labor is of no great economic advantage.

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[*] The objectionable features of the Wisconsin law was amended by the Legislature of 1903, so that no child under 14 yrs. of age can work in factories or workshops, bowling alley, bar room, beer garden, or in or about any mine.

[†] For convenience in this discussion, the states having no age limit to work in factories will be called "group I;" those having a 12-year limit "group II," and those having 13 and 14-year limit, "group III."

But it may be claimed that industries vary so in different states as widely separated as the above that it is not safe to take all the industries of a state and compare them with all the industries of another state differing so in climate and natural resources and resulting industries, as Maine differs from Alabama. In order to show whether the result would be materially different, the following table is made up showing the average yearly earnings of both children and adults in the cotton goods industry, and comprises all the above twenty states employing seven hundred or more children in this one industry.

In this table the states are divided into groups, as suggested in a foot note on a previous page. In the first group have been placed those states having no regulations as to child labor in 1900; in the second group are placed those states requiring children to be twelve years of age before they can work in factories; while in the third group have been placed those states requiring children to be thirteen or fourteen years of age to work in factories.

TABLE II.—COTTON GOODS.

State.	Average yearly earnings of adults.	Average yearly earnings of children.	Per cent. of children to total number employed.
GROUP I.			
North Carolina	$190	$103	23.5
South Carolina	196	99	26.8
Georgia	224	108	24.5
Alabama	213	94	29.2
Average	$200	$101	25.4
GROUP II.			
Maryland	$282	$149	23.6
Maine	325	161	5.6
Average	$315	$154	10.2
GROUP III.			
Pennsylvania	$360	$151	11.0
New York	310	180	9.3
Massachusetts	362	198	6.4
Rhode Island	351	187	10.3
Connecticut	346	164	7.0
Average	$356	$185	7.6

While the certainty with which wages seem to be affected by child labor regulations does not seem to be so great as in Table I, yet the general results are not materially different. The proportion of children to the total number employed varies from one out of four in the states of group I, to one out of 10 in group II, and to one out of 14 in group III, while the average wages in the corresponding groups are $101, $154 and $185, for children, and $200, $315 and $356 for adults. Wherever the required age is the highest, there the wages for both children and adults are the highest.

In the hosiery and knit goods industry the results are much the same. In the following table all the above twenty states employing ninety-six or more children in this line of work have been taken. The states have been divided into groups the same as in Table II. The percentage of children to the total number employed is 22 in group I, 14.5 in group II, and 10.2 in group III, while the average yearly earning for children in the corresponding groups are $105, $140 and $149, and for adults, $219, $233 and $344 respectively.

TABLE III.—HOSIERY AND KNIT GOODS.

State.	Average yearly earnings of adults.	Average yearly earnings for children.	Per cent. of children to total number employed.
GROUP I.			
North Carolina	$223	$91	25.2
Georgia	188	103	25.7
South Carolina	251	124	35.7
Virginia	229	119	13.9
Average	$219	$105	22.0
GROUP II.			
Maryland	$194	$59	14.1
Wisconsin	240	155	22.9
Michigan	238	121	5.5
Average	$233	$140	14.5
GROUP III.			
Pennsylvania	$301	$142	18.9
New York	344	185	3.5
Illinois	286	146	8.6
New Jersey	245	111	8.3
Rhode Island	304	202	9.0
Indiana	364	77	5.5
Connecticut	444	178	24.2
Average	$344	$149	10.2

In certain fields of industry like the manufacture of cotton goods or hosiery and knit goods we may find the establishments paying the lowest wages, working their employes the longest hours, and under the worst sanitary conditions, temporarily driving out of the field of competition those establishments paying the best wages, working their employes a reasonable length of time surrounded by the best sanitary conditions; but if the process is allowed to continue the nation tolerating it will certainly revert to a state of discontent, poverty and crime, which no agency or force can overcome so well as wise factory legislation strictly and judiciously enforced. The Duke of Argyle once made the declaration that factory legislation is one of the two greatest discoveries that has been made in the science of government, and wrote that "the factory acts, instead of being excused as exceptional, and pleaded for as justified only under extraordinary conditions, ought to be recognized as in truth the first legislative recognition of a great natural law." How different is this sentiment from that expressed by Harriet Martineau after visiting the cotton operatives in England about the year 1830. She said, "The only hope seems to be that the race will die out in two or three generations." But the race did not die. The regulation of factories either by law or by special agreement worked marvelous changes. In the course of half a century the "sweated" laborers of this great country whose course of life seemed almost run, became energetic, self-reliant, intelligent and efficient workers, owning their own homes, amid wholesome surroundings, and working a reasonable number of hours for a day's work.

Not only is factory legislation sound in principle, but wherever put to the test it has been found sound in practice as well. Wherever a wholesome standard of living has been set up in factory legislation below which neither employer nor employe can go, the price of the article manufactured has invariably fallen. Wherever a uniform standard of wages, hours of labor, and wholesome sanitary conditions have been uniformly enforced, the result has been that laborers have been stimulated to render greater services to their employers, and in turn, employers strive to excel in improved machinery and devices for the protection of employes, sanitation, and methods of production in general.

To provide a factory with modern sanitary appliances such as baths, water closets, ventilating systems, etc., incurs a great expense and employers will insist that employes should be neat and clean in their habits. Whenever the piecework rate is fixed either by law or by labor unions, the employer is bound to engage workmen having the greatest skill so as to avoid, as much as possible, damage to machinery and tools, materials and articles produced. This means the employment of men and women whose habits are regular and whose characters are the best. These requirements serve to raise the standard of living of those persons already employed and also as an impetus to the youth seeking employment to so conduct himself as to receive the respect of employers necessary to his obtaining employment.

But it is not enough to merely attain such a standard; it must be maintained. Employers must allow a laborer a sufficient amount of food and clothing for himself and family to live in accord with the best ideas of the civilization in which he is placed. He must have a sufficient amount of time for recreation and self improvement to enable him to attain the highest citizenship compatible to his station in life. It is then, and not until then, that labor will rise to the dignity of its calling and will return to its employer and the nation which protects it one hundred cents for every dollar it receives in wages. Then, and not until, will the laborer demand that his family shall have as pleasant, or even better surroundings at home than he has in the factory. Then, and not until, will the hovel in the slum give way to the neat little cottage in the suburbs with its school and other intellectual advantages. Then, and not until, will the laborer be welcome home after his day of toil by his family of happy children eager to tell him the incidents of the day at school, instead of greeting him with the cry for bread with no bread to feed them. Then, and not until, will a class of laborers be produced that will enable employers to embark in new industries and to carry through undertakings that would be impossible with a less intelligent class. It is the intelligent laborer which enables the world to make progress.

There is no better standard for measuring the intelligence of a people than the instruments of production and means of transportation used by them. Whenever a manufacturer finds that on account of strictly enforced factory legislation he can no longer overcrowded his factory with workmen, that there is a reasonable number of hours for a day's work beyond which he cannot go, that there is a minimum price for piece-work which he must pay, that he must keep the sanitary conditions of his shop up to a certain standard and his machinery properly guarded for the protection of employes, he will no longer be content to use the same class of machinery decade after decade, but will in his struggle to compete with others, constantly seek the most improved machinery and methods of production. Through a mistaken idea, laborers sometimes resent the introduction of labor-saving machinery, but when they take into consideration the great works of construction, engineering, transportation and hundreds of other branches of industry capable of being executed only through the invention and introduction of labor-saving machinery, they will understand that instead of such machines narrowing the field of labor, they will constantly make it broader and broader; when they understand that the purchasing power of the wages they receive is constantly being increased by the ever diminishing cost caused by labor-saving machinery; when they understand that the demand for an article increases at even a greater ratio than the decrease in price, resulting in both an increase in the demand for labor and the rate of wages, then they will no longer register a protest against labor-saving machinery, but will welcome every device which tends to increase their portion of the products of their labor and which augments the wealth of the nation in general, for the more that is produced the greater the amount of wealth is accummulated. The evils of foreign immigration are not found in the fact that they take the places of our own native laborers, but in the fact that their standard of living is generally so low and their helplessness so great, that they become a burden upon those who are striving to uplift the standard for all.

When Howe invented his sewing machine in 1846, the tailors looked forward to the "direst consequences" to their trade, but they lived to see that this invention cheapened clothing to such an extent, and the consumption so increased that more work and better wages was the final outcome.

The drivers of the old fashioned horse-car saw in the modern electric street car an invention for further degrading their already wretched condition, but when it finally became installed the efficiency of the service became so great and the patronage so increased that wages in hundreds of instances were marked up more than 100 per cent, and the number of employers doubled and trippled again and again.

That the enforcing of a certain standard in regard to hours of labor, wages, and sanitary conditions, compels employers to continually seek more improved machinery and methods of production is as true in practice as in theory. In 1858, when the laws of England debarred children from the woolen factories, the invention of the piecing machine soon followed.

In 1898, when a slight reduction was made in the hours of labor for women in the Eastbourne Steam Laundry, machinery was at once installed to do the work in less time. In the same year, the Factory Inspector of Victoria reported that when legal minimum wages were enforced for the boot and shoe operatives "a large increase in the amount of labor-saving machinery is taking the place, in anticipation of the coming into operation of the determination (of the minimum wage) of the Boot Board."* This same thing happened a year later when a minimum wage was established for women working in the "slop clothing trade." On the other hand, antedated methods of production and unsanitary conditions of the worst type exist, and the longest hours of labor are imposed upon workmen and a greater number of children are employed, in the unregulated industries than in the regulated ones. Besides this many eminent students of social conditions maintain that in countries when industries have been allowed to run for centuries without any form of regulation, pauperism and crime are more prevalent than in those countries where regulation exists. Also, in countries where regulations have been imposed and withdrawn, misery and want have risen and fallen in almost direct proportion to the imposition and withdrawal of such regulation, and poor relief has ebbed and flowed in almost the same proportion.

Among other forms of factory legislation many states have what is popularly called "Employer's Liability Acts," which fix the responsibility of injury to "life or limb" of employes upon employers, providing such injury is received while in the employ of others and is not the result of carelessness or negligence on the part of laborers themselves. But employers of labor claim that courts, without any regard to justice, have been so universal in their decisions against them, and as a result of this the tax upon industry has been so great that they have been compelled to adopt a system of accident insurance in order to escape the burden imposed by these acts.

The requirement of weekly wage payments is also said by manufacturers to be a tax upon industry because of the extra number of clerks required and because, in order to keep their machinery and employes busy, they must often times sell on credit, and to be compelled to pay weekly wages under such circumstances is often burdensome.

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*Quoted from the Factory Inspector's report of Victoria. The language is ambiguous.

But the struggle between capital and labor does not really begin until the question of "shorter hours" is reached. Manufacturers maintain that by enforcing shorter hours they are unable to compete with those factories which are not hampered in this way. In order to test the truth or falsity of this claim, the Salford Iron Works of Manchester, England, voluntarily reduced the number of hours required for a day's work to eight. After giving the system a fair trial, the management declared that the character of work performed and wages paid remained about the same; that although a depression in trade took place about the same time this experiment was being made, and competition was exceedingly fierce, the output was greater and the receipts larger than under the old system. The Salford Iron Works continue the eight hour system to the present day, and other allied industries and the arsenal works and dock yards are following the example.

But an article appearing in the June number of the "Bulletin of Wool Manufacturers" for 1891 tends to show that the textile industries of Massachusetts were at that time on the decline and endeavors to fix the responsibility upon the factory legislation of a few years previous. But an investigation of the facts in the textile industries of which this bulletin is the mouthpiece reveals a far different condition of affairs. At the time this article was published a wave of financial depression was sweeping over the entire country. Factories were no longer being built and those that had been enjoying a lucrative trade were being closed. Yet, from 1887 to 1896 the number of spindles in Massachusetts increased over 46 per cent, while those of Maine increased only about 11 per cent, New York 13½ per cent, Rhode Island 13⅓ per cent, New Jersey 25¼ per cent, and Pennsylvania 25 per cent, while the number in Connecticut actually decreased 4¼ per cent. Massachusetts is the only state in this group which had taken advanced ground in factory legislation prior to 1888, and yet the increase in the number of spindles was over 70 per cent greater than in either of the other states.

But the history of subsequent years shows a general decline in the textile industries in Massachusetts. Factories for the manufaucture of the poorer classes of cotton goods are leaving that state and are being built up in the South where freight on raw material is practically nothing, where taxes are low, where buildings are constructed at a less cost, where water-power is abundant, where the hours per day are long and where land, labor and fuel are cheap. But what Massachusetts has lost in the manufacture of cheap cotton goods, it has regained, through the intelligence and efficiency of its workmen, by extending its business in the higher grades. Whatever reason may be given for this loss, it cannot well be laid to the door of factory legislation for the iron mills of this state closed their doors and established themselves in the iron and coal fields of Pennsylvania long before any real factory legislation existed in Massachusetts.

Yet all that has been accomplished has not been brought about directly by factory legislation. Labor Unions, when once given the right to exist by statutory law and are protected in this right, have been (and will continue to be) powerful agents in factory reform. In England factory regulation by law and by Trade Unions overlap each other. In one locality the regulation of wages is left solely with Trade Unions while the power of regulating hours of labor is conferred upon the factory inspector. In other places this process is reversed. In the United States questions of wages are almost wholly left for Labor Unions or individual laborers to settle with employers, while hours of labor and sanitary conditions are matters of legislation. In all the states having laws upon the subject of hours of labor, employes are free to receive better terms with employers than even the law grants them. Yet, however commendable Labor Unions are, and however good their intentions may be, it is a question whether the same stability accompanies regulations or agreements arrived at under trade pressure between Labor Unions and employers that accompany restrictions written into law.

Another factor which enters very largely into the accomplishment of the needed reforms in the world of labor is the great system of public schools. In an address before the National Consumers' League in April, 1903, in New York, Mrs. Kelley complained of the insufficient number of Factory Inspectors, and advocated compulsory education laws as the best means of enforcing child labor legislation. If this be true, among other things, it is to be expected that the smallest percentage of child labor to the total number employed will be found in the states having the most stringent compulsory education laws. It will be expected that children working in the factories in these states will receive the highest annual wage rate and that the percentage of children attending school between the ages covered by the compulsory education law will be the greatest. It will be expected, also, other things being equal, that the amount of illiteracy among children between these ages will be greatest where there is no compulsory education law or where such laws operate the least. That all these are true in the main, there can be no doubt, but whether they vary in proportion to the variations found in the compulsory education laws, with the same regularity with which they vary with the child labor laws, is a question. In the State of Missouri where there is a very stringent and well enforced child labor law, but no compulsory education law, children receive a higher annual wage rate than they do in either New York, New Jersey, Maryland, Wisconsin, Ohio, Indiana, Michigan or Maine where in most instances excellent compulsory education laws exist. A smaller percentage of children to the total number employed are found working in factories of Missouri than in either Pennsylvania, Wisconsin or Rhode Island with compulsory education laws. More than this, about the same percentage of children between 10 and 15 years of age attend school in Missouri that attend in either Pennsylvania, Illinois, New Jersey or Rhode Island; but a greater per cent of illiteracy exists in that state among children between those ages than in either of the latter, or than any of the states having compulsory education laws.

But the real significance of what compulsory education laws mean in the various states can be more clearly comprehended by examining the summing up of the requirements of school attendance in the various states in Table IV, as in Table V, and comparing the results with other conditions found. New York and Maine require a total of 64 months school attendance, yet the amount of illiteracy in Maine exceeds that of Pennsylvania with only 20 months required school attendance, Illinois with only 28 months, New Jersey with 40 months, Wisconsin with 21 months, Rhode Island with 32 months, Ohio with 28 months, Indiana with 18 months, and is nearly as great as Missouri with no required school attendance. The wages paid children in Missouri where no attendance is required is greater than in Pennsylvania, with 20 months required attendance, New York with 64 months, Wisconsin with 20 months, Indiana with 18 months, Michigan with 45 months, and Maine with 64 months.

TABLE IV.—SHOWING LENGTH OF TIME PER YEAR, AND BETWEEN WHAT AGES, CHILDREN ARE REQUIRED BY LAW TO ATTEND SCHOOL IN 20 STATES HAVING THE LARGEST NUMBER OF CHILDREN WORKING IN FACTORIES AND WORKSHOPS IN THE UNITED STATES IN 1900: ALSO SHOWING THE NUMBER OF CHILDREN ATTENDING SCHOOL, NUMBER OF ILLITERATES BETWEEN 10 AND 15 YEARS OF AGE AND THE PERCENTAGE OF EACH TO THE TOTAL NUMBER, IN 1899-1900.

STATE.	ATTENDANCE REQUIRED BY LAW.		CHILDREN BETWEEN 10 AND 15 YEARS OF AGE.				
				Attending school.		*Illiterates.*	
	Length of time per year.	Between what ages.	Total.	Number.	Per cent of total.	Number.	Per cent of total.
Pennsylvania	4 months	8 and 13	624,241	522,454	83.7	6,326	1.0
New York	Oct. to June	8 and 16	643,787	567,071	88.1	4,740	.7
Massachusetts	Entire time school is in session	7 and 14	229,330	209,081	91.2	1,547	.7
Illinois	4 months	7 and 14	494,880	411,852	83.2	4,040	.8
North Carolina	No requirements.		235,325	148,994	63.3	51,190	21.8
South Carolina	No requirements.		174,363	90,818	52.1	51,536	29.0
New Jersey	All time school is in session	7 and 12	174,347	146,885	84.2	2,069	1.2
Georgia	No requirements.		227,865	161,590	58.2	63,329	22.8
Maryland	No requirements		126,217	96,675	76.6	5,859	4.7
Wisconsin	12 weeks.	7 and 14	232,112	205,281	88.4	1,688	.7
Rhode Island	80 days	7 and 15	36,739	30,876	84.0	691	1.9
Missouri	No requirements.		347,275	289,483	83.4	11,660	3.4
Ohio	20 weeks in cities, 16 weeks in country	8 and 14	414,847	379,153	91.4	2,048	.5
Virginia	No requirements.		220,837	151,226	68.5	34,612	15.7
Indiana	12 weeks	8 and 14	264,822	239,536	90.5	1,453	.6
Connecticut	Ent. time school is in session	7 and 16	76,355	68,639	89.9	436	.6
Alabama	No requirements		228,685	124,727	54.5	66,072	29.0
Kentucky*	8 weeks	6 and 14	251,653	193,326	76.8	21,247	8.4
Michigan	All year in cities, 4 mo. in country.	7 and 15 for cities and 8 & 15 for country	247,617	222,402	89.8	1,744	.7
Maine	During time school is in session	7 and 15	60,307	53,975	89.5	1,255	2.1
Total			5,361,604	4,323,044	80.6	333,542	6.2

*The law is so worded that it practically amounts to "no requirements."

TABLE V.

The following table shows the total number of months children were required by law to attend school in 1899-1900. This total is found by multiplying the number of months each state requires children to attend school per year by the number of years of required school attendance.

State.	No. of months children are required by law to attend school.	State.	No of months children are required by law to attend school.
Pennsylvania	20	Rhode Island	32
New York	64	Missouri	none
Massachusetts	56	Ohio	28
Illinois	28	Virginia	none
North Carolina	none	Indiana	18
South Carolina	none	Connecticut	56
New Jersey	40	Alabama	none
Georgia	none	Kentucky	none
Maryland	none	Michigan	45
Wisconsin	21	Maine	64

NOTE.—In the above list there are eight states having no compulsory education law. New York and Maine require an equivalent of eight years of eight months each school attendance of every child before it can enter upon any life occupation. On the same basis Connecticut and Massachusetts require seven years' school attendance. Michigan nearly seven years, New Jersey five years, Rhode Island four years, Illinois and Ohio four and one-half years, and Wisconsin, Pennsylvania and Indiana about two and one-half years.

Of course other elements enter into these conditions than compulsory education and factory laws such as general character of the industries and resources in the various states, and the situation of a state where it is likely to receive a large number of foreign children whose parents immigrate into this country. But an examination of statistics appears to show that compulsory education laws do not have as great effect in enforcing child labor laws as might be attributed to them. Nearly all compulsory education laws provide for local officers to enforce them which is generally a very serious obstacle in the way of executing the law. Local officers are apt to be careless in performing such duties and feel timid about entering the homes of neighbors and interfering with what appears to be the family affairs of others, while a factory inspector whose duty it is to enforce child labor laws will enter a factory, discharge illegally employed children and prosecute employers without fear of interfering with anyone's "family affairs." Besides this, compulsory education laws are often objected to by various church organizations, and in framing such laws various religious denominations have to be taken into consideration and often to the extent of making them ineffective, while such obstacles do not appear in the way of child labor laws to any great extent.

Nevertheless, child labor laws and compulsory school laws should go hand in hand and similar means of enforcing each should be provided. Children can be easily turned out of factories and workshops but it is a very different thing to get them into school. Compulsory education laws can and should be made as effective in getting children into school after once being turned out of the factory as the law which turns them out. When this is done better results will be attained. The streets and alleys of the cities will be less crowded, the pay-rolls of the factories will contain fewer children, and the school enrollment will increase. A more intelligent class of laborers will be produced and the increase in the material wealth of the state will be greatly accelerated. Of course it is not always true that an educated man will perform a piece of work better than an uneducated one, for there are certain kinds of work which do not require any great amount of education, nor is education in the higher branches of learning of any direct advantage to anyone in the field of labor except to employers and foremen and the higher classes of skilled workmen. But the indirect advantages to all classes of laborers are certainly not to be disregarded. In Marshall's "Principles of Economics" the indirect advantage of an education to a laborer is summed up in these words: "It stimulates his mental activity; it fosters in him a habit of wise inquisitiveness; it makes him more intelligent, more ready, more trustworthy in his ordinary work; it raises the tone of his life in working hours and out of working hours; it is thus an important means towards the production of material wealth; at the same time that, regarded as an end in itself, it is inferior to none of those which the production of material wealth can be made to subserve."

More than this, greater progress has been made in countries where the great "leaders of industry" have risen up out of the laboring classes as in the North of England, Scotland, Germany and the United States, than in the South of England where these leaders are the product of cast or where the class spirit so predominates that the natural genius among the laboring class has no chance of rising to a post of command.

In the United States the best schools are generally in those states where teachers receive the highest wages and where the cost per capita of population for maintaining them is greatest. In the twenty states under consideration, fourteen pay $2.47 or more per capita of population for the support of their schools, and the average value per capita of population of all products produced in the same states in 1899 was $195 or over, and in all these states there is a compulsory education law except in Missouri and Maryland, and in all there are child labor laws. In the remaining six, there are neither child labor laws nor compulsory education laws and the expenses for running schools in these range from 50 cents to $1.29 per capita of population and the average per capita value of the products produced in these same states in 1899 ranged from $95 to $129. The following table shows in detail the per capita valuation of all products produced in 1899 and the amount expended per capita of population and of pupils attending school, for the maintenance of schools in the states included in this discussion.

TABLE VI.—SHOWING AVERAGE MONTHLY SALARIES OF MALE AND FEMALE TEACHERS AND THE ANNUAL EXPENDITURES FOR SCHOOL PURPOSES FOR TOTAL POPULATION AND PER PUPIL FOR 1899-1900, EXCEPT AS OTHERWISE NOTED, AND THE AVERAGE PER CAPITA VALUATION OF PRODUCTS PRODUCED IN 1899.

STATE.	AVERAGE MONTHLY SALARIES PAID TEACHERS.		Amount expended for school purposes per capita of population.	Average expenditures per pupil per year.	PER CAPITA VALUATION OF ALL PRODUCTS PRODUCED IN 1899.		
	Males.	Females.			Agriculture	Manufacture.	Total
Pennsylvania	$44 25	$37 74	$3 41	$25 12	$33	$291	$324
New York	....	....	4 60	38 97	34	299	333
Massachusetts .	136 54	52 50	†4 93	37 76	15	369	384
Illinois	60 34	52 45	3 68	24 07	72	261	333
North Corolina	24 64	22 21	* 51	4 34	47	50	97
South Carolina..	*25 96	*23 20	67	4 44	51	44	95
New Jersey	‡86 21	‡48 12	3 34	30 26	23	325	348
Georgia	....	....	89	6 64	47	48	95
Maryland	....	....	‡2 47	21 95	37	204	241
Wisconsin	72 93	38 61	2 66	17 73	76	174	250
Rhode Island	‡103 74	‡51 00	3 66	34 09	15	430	445
Missouri	49 50	42 50	2 52	16 99	71	124	195
Ohio	50 00	41 00	3 21	21 63	62	200	262
Virginia	‡32 09	‡28 39	‡1 08	9 70	47	71	118
Indiana	48 80	43 55	‡3 30	19 28	81	150	231
Connecticut	88 68	44 40	3 51	28 58	31	388	419
Alabama	31 00	27 00	50	3 10	50	44	94
Kentucky	†44 03	†37 18	§1 29	8 58	57	72	129
Michigan	‡44 48	‡35 35	‡2 74	18 68	61	147	208
Maine	39 30	28 59	2 47	17 53	53	183	236

*In 1897-98. † In 1895-96. ‡ In 1898-99. § In 1889-90.

Corresponding closely with the results found above are those found in Tables VII and VIII following. In the states having neither compulsory education nor child labor laws the number of pupils between 10 and 15 years of age attending school six months or over in the year 1899—1900, varies from 20.2 per cent of the total number enrolled between these ages to 41.5 per cent, while in those states having child labor laws the number varies from 75.6 per cent in Missouri to 98.6 in Connecticut, and in the states having both these laws, the number of pupils between these same ages attending school six months or over varies from 88.3 per cent in Maine to 98.6 per cent in Connecticut.

TABLE VII.—SHOWING NUMBER OF CHILDREN BETWEEN 10 AND 15 YEARS OF AGE WHO ATTENDED SCHOOL IN 1899-1900, CLASSIFIED ACCORDING TO MONTHS OF SCHOOL ATTENDANCE.

State.	One month or less.	Two to three months	Four to five months.	Six months or over.	Total.
Pennsylvania	1,284	7,759	23,774	489,637	522,454
New York	1,112	3,968	10,782	551,209	567,071
Massachusetts	399	1,095	1,680	205,907	209,081
Illinois	1,689	11,168	29,035	369,960	411,852
North Carolina	10,509	66,478	41,901	30,106	148,994
South Carolina	3,750	30,544	24,474	32,050	90,818
New Jersey	250	1,443	3,000	142,192	146,885
Georgia	6,960	44,731	54,352	55,547	161,590
Maryland	329	2,841	5,990	87,515	96,675
Wisconsin	662	5,532	12,997	186,090	205,281
Rhode Island	83	403	624	29,766	30,876
Missouri	3,835	22,488	44,405	218,755	289,483
Ohio	888	6,446	21,418	350,401	379,153
Virginia	2,692	17,946	67,874	62,714	151,226
Indiana	618	4,515	17,162	217,241	239,536
Connecticut	74	305	600	67,660	68,639
Alabama	7,184	52,310	28,370	36,863	124,727
Kentucky	5,092	34,468	90,350	63,416	193,326
Michigan	666	4,785	11,153	205,798	222,402
Maine	83	905	5,332	47,655	53,975
Total	48,159	320,150	495,273	3,450,482	4,314,044

TABLE VIII.—SHOWING PER CENT. OF CHILDREN BETWEEN 10 AND 15 YEARS OF AGE WHO ATTENDED SCHOOL IN 1899-1900, CLASSIFIED ACCORDING TO MONTHS OF SCHOOL ATTENDANCE.

State.	One month or less.	Two to three months.	Four to five months.	Six months or over.	Total.
Pennsylvania	.25	1.49	4.55	93.71	100
New York	.20	.70	1.90	97.20	100
Massachusetts ..	.19	.52	.80	98.49	100
Illinois	.41	2.71	7.05	89.83	100
North Carolina......	7.05	44.62	28.12	20.21	100
South Carolina	4.14	33.63	26.94	35.29	100
New Jersey	.17	.98	2.04	96.81	100
Georgia	4.31	27.68	33.63	34.38	100
Maryland	.34	2.94	6.19	90.53	100
Wisconsin	.32	2.69	6.34	90.65	100
Rhode Island........	.27	1.31	2.02	96.40	100
Missouri.............	1.32	7.84	15.34	75.57	100
Ohio	.23	1.70	5.65	92.42	100
Virginia	1.78	11.87	41.88	41.41	100
Indiana..	.26	1.88	7.16	90.70	100
Connecticut	.11	.45	.87	98.57	100
Alabama.............	5.76	41.94	22.75	29.55	100
Kentucky	2.63	17.83	46.73	32.81	100
Michigan	.30	2.15	5.01	92.54	100
Maine................	.15	1.68	9.88	88.29	100
Average	1.12	7.42	11.48	79.98	100

The legislature of Wisconsin for 1903 amended the school laws so that instead of requiring twelve weeks per year school attendance of children between seven and fourteen years of age, those living in towns, villages and country districts are required to attend school regularly twenty weeks per year; and children between these ages living in cities are required to attend school regularly thirty-two weeks per year. Besides this, children between fourteen and sixteen years of age are subjected to the same requirements provided they are not regularly employed at some useful occupation. The law also provides for truant officers to enforce the law. School boards, or other boards having the power of school boards, must appoint these officers in cities having a population of 10,000 or more, and in towns, villages and cities having less than 10,000 population, truant officers may be appointed by the boards of education; but when not appointed the enforcing of the law falls upon "the city superintendent of schools in cities having such officer" and upon the "chairman of the board of education or the district board in all other cities, towns, villages and districts." Factory inspectors have the power of truant officers and must enforce the law whenever its violation comes to their notice. One of the principal obstacles in the way of local officials enforcing compulsory education laws has already been referred to, and it is a question whether the confering of the powers of truancy officers upon the factory inspectors has greatly strengthened the law in Wisconsin because of the limited number of inspectors who are already overcrowded with work. But it has one advantage at least, i. e., —an inspector finding a child employed in violation of the child labor law can see to it that such child is placed in school.

The child labor law of Wisconsin was also greatly strengthened by the same legislature. No child under fourteen years of age can be employed at any time in any factory or workshop, nor can children between fourteen and sixteen years of age be so employed without first securing a permit from the Bureau of Labor, Factory Inspector, County or Municipal Judge of the county where such child resides. Just what the effect of this law has been upon child labor cannot be stated definitely on account of the short time the law has been in operation and for the lack of complete statistics on the subject. But from what statistics there are given in the factory inspector's report, child labor has materially lessened since the passage of this law. During the biennial period ending in August, 1902, the factory inspectors reached 151,087 employes in the factories and workshops of this state and 6,851 or 4.53 per cent of these were children under 16. For the biennial period ending in August, 1904, the inspectors reached 158,848 employes of which number 6,285 or 3.96 per cent were children under 16. This is a decrease of 12.58 per cent of the number of children employed in the factories and workshops and yet the law was in operation but little over one-half the period covered.

According to a recent report of the factory inspector of the State of New York, where the child labor law is similar in many respects to the Wisconsin law, the sweating of children has been almost wholly abolished, wages have advanced two and three dollars per week and the cost of the factory products in human life has been marked down 50 per cent. While other states report somewhat similar results, yet a great deal remains to be accomplished. In the United States there is a larger percentage of children to the total number of persons working for wages than in either Germany, England or Italy. This is due in a very large measure, if not wholly, to the extent of child labor in the southern states. To overcome this there must be more uniformity in child labor and other factory legislation as well as enforcement of the law. The age limit below which children cannot work in factories should in all cases be no less than fourteen years, and school laws should be so formulated as to compel children under that age to attend school and not be permitted to drift toward some penal or charitable institution by lounging around the streets and dark alleys of the city. The law should not only include factories and workshops but should be extended to include all trades and processes. The same law that applies to the factory should be extended to include every home or place where work is given out, and heavy penalties should be imposed upon employers to enforce its observance. A maximum number of hours, varying according to the nature of the work, and the character of employes, whether male, female, or children, but always within the bounds of reasonable human endurance, should be imposed. All places coming under the law, where work is performed whether in the factory, workshop or the home, should be required to register so there can be no escape from the eye of the factory inspector. In this age of great industrial organizations and combinations of wealth, some means of preventing a general reduction of wages should be provided. Wage earners are not only producers but they form a large proportion of the great body of consumers so long as the wages received enable them to maintain the proper standard of living; but when sweeping reductions are made, this portion of the consumers is cut off, *and a glut in the market* is the inevitable result; and manufacturers are forced to rely upon foreign markets to work off their surplus products.

The list of needed reforms might be extended almost indefinitely. In order for the victory to be complete, instead of legislators who have only their own selfish interests in mind, or who follow the dictates of great employers of labor, there is need of statesmen who have the interests of the human race at heart.

The army of those who simply look upon and philosophize about the wretched conditions of the laboring poor needs to be disbanded, and there should be enlisted in its stead an army of men and women of action who will go down into the slums and root out the evils of "sweating" from the basement to the garret. There is need for more officers to enforce the law. In England, the complaint is made that one of the greatest obstacles in the way of accomplishing the desired results is the insufficient number of inspectors to enforce the law. Yet England has 100 factory inspectors with an average of but little over 1,000 factories and workshops for each to inspect, while Wisconsin with a greater area by 5,000 square miles to be covered has only eight inspectors with an average of over 2,000 factories and workshops in addition the numerous mercantile establishments, school houses, and other public buildings to inspect. Instead of the office of factory inspector being made the reward of political labor it should be made the reward of rigid and judicial enforcement of the law. This will never be done until it is placed under some form of civil service where it cannot be used to advance the interests of any political party or individual, and where it cannot be made the object of political spoil.

SWEATING IN THE GARMENT-MAKING TRADES.

SWEATING DEFINED.

Both in England and America there seems to be held by students of the subject two quite distinct ideas of the term sweating. One definition lays stress upon the system of contracting and sub-contracting, making the middleman the sweater and chief element, and attributing most of the evil conditions surrounding the work to the system of sub-letting. By this sub-letting the workmen and sweaters sometimes to the third, fourth or fifth division, have to draw their profit. The second definition assigns much less importance to the middle-man and takes as a basis the condition of the laborer. It is a definition that might apply to the poor, helpless and unskilled in any occupation when the condition of the labor market is such as to leave any unscrupulous employer with a great number of people more or less helplessly dependent upon his will. Sweating, it holds, is marked by excessive hours of labor, unsanitary conditions of the buildings in which the work is carried on, and an unduly low rate of wages. At an earlier date the horrors of the task system increased the evil, a system by which the weak and inefficient were worked to the point of exhaustion to keep up with the able-bodied and swift in completing the task. This, however, has been abolished.

Although at different times and places certain of the elements before mentioned may be lacking and additional minor elements may be found as a result, the two definitions taken together, completely define the sweating system.

The term "sweating" is used in various ways according to the element considered most deplorable. Trades unions often apply it to employers who pay less than the union scale of wages, or who work their employees long hours or overtime. Social workers apply it to unsanitary conditions surrounding the workers in sweated industries. Others apply it to all industries carried on in homes for the factories. Still others apply it to all piece work distributed about through contractors. In general it is applied to all overworked, underpaid, ill-housed, oppressed and helpless workers in the congested portions of large cities.

ELEMENTS OF SWEATING SYSTEM.

It is hardly possible to say what is the chief cause of sweating. To produce sweated conditions three elements must exist: first, a public demand for such goods and an industry that lends itself easily and naturally to sweating; second, a class of people who are willing to do this work; and third, an agent, whether wholesaler or contractor, who brings work and workers together.

In the whole complex system of sweating it is generally understood that somewhere there is a "sweater," one who tries to get the greatest possible return for the smallest expenditure of energy or capital. Who this sweater may be is hard to determine.

At a very early date the term sweating was applied to those tailors who took work home from the wholesale houses and returned the finished garments which were paid for by the piece. In order to increase their earnings they worked all day and far into the night, often fourteen or fifteen hours out of every twenty-four, giving themselves no time for improvement or recreation, and barely enough time to eat and sleep. They stopped work only when too exhausted to continue. These people then came to be termed sweaters, workers who sweated themselves by long hours of unceasing toil to increase their meager earnings.

As might naturally happen these tailors often received more work than they could do themselves, and so they began to gather around them other workers, first, members of their own families, and then outside help, recruited from the surrounding neighborhood. This was the beginning of the "sweatshop," not a separate establishment by any means, but one of the living rooms, or a room adjoining. Here the same process went on and with the over-crowding of the workers, unsanitary conditions were added to the already existing evils of long hours and low wages.

While these tailors usually worked right along with their employes, cases developed where they became simply contractors and overseers, doing none of the actual work upon the garments but being responsible for all of it. From sweating themselves, they began to sweat others, and so to this middleman, or contractor, one who overworked and underpaid his employes, the term sweater came to be generally applied.

The garment making industry seems to be the one which lends itself most naturally to this process of manufacture. Much of the work requires little or no machinery, and can be easily subdivided and carried to the different shops and homes. At most, the only machinery or implements needed are a sewing machine and a flat iron. The process of pressing draws much of this work into kitchens where the irons are heated. Thus it is seen that the garment making industry is one that falls easily into conditions already existing. Not only is this true of the wholesale work where dozens of garments are cut and made up on the same pattern, but much of the most expensive clothing furnished by custom tailors, after being cut in the regular work-rooms, is sent out to tailors working at home. These people in many cases also sew in living rooms and do pressing in kitchens, and as far as work rooms and sanitary conditions are concerned, such work differs very little from that done for the wholesale houses.

The second element, a class of workers willing to do this work, is usually found in the congested portions of large cities. Here in the tenements is found the unfortunate class who through poverty, misfortune, and lack of education and skill are unable to extricate themselves from their miserable surroundings. The newly arrived immigrant to this country forms an easy recruit for this class. Sometimes he is simply transplanted from the horrible tenements of the crowded cities of Europe and finds again in a tenement his customary surroundings. Sometimes he comes from the country districts, inland hamlets or coast towns of eastern and southern Europe, where the old hand method of industry is still common in shop or home. Neither by training or habit is he suited to the modern factory life of America. Since he must live, and consequently must work, he finds employment either at common labor or at something which is easily learned and can be done at home. Garment making offers these two advantages to him and so the sweatshop and tenement have come to be closely associated.

The third element, the agent who brings work and worker together, may be either the wholesaler or the contractor. In case it is the wholesaler, he gives out the cut garment directly to the person who does the work upon it and who returns the finished garment, receiving from the wholesaler payment by the piece. In this case the person taking the work home hires no outside help and takes no more work than he can do himself with perhaps some aid from members of the family. At any rate he pays no wages, and finds his profit in actual work upon the garment, rather than directing the work of other people.

In case the agent is a contractor, those who furnish the material and those who do the majority of the work upon it never come in contact. The contractor usually bargains with the wholesaler or some other agent to do a certain amount of work for a certain price. This of course includes more work than he can do himself but he depends for the rest upon the help of outside workers employed by him.

The garments contracted for are as usual cut out and marked at the wholesale house. They are then taken by the contractor to his shop or home and there made up or distributed to the workers who take them home and there make them up. Sometimes the contractor acts merely as a distributing agent, parcelling out the garments to the workers, and being responsible for them until returned, finished, to the wholesale house. Again, where he maintains a shop, he usually does a part of the work himself and superintends the whole of it. In the tailoring industry most of the so-called "finishers" are connected with the contractors' shops, coming there for the garments, contracting for them at a certain price per piece, and finishing them up at home, after which they are returned to the tailor shops. This is the system of subletting often found so vicious when each worker is ground down to the lowest bargain by the one above him, and the profits for all have to come out of the price paid for the finished garment at the wholesale house.

Whether this distribution is carried on by wholesaler, contractor or custom tailor, the sanitary condition of the places into which such work is sent is of the gravest importance to the public. Woolen garments are a medium through which disease is easily carried, and indifference to this fact on the part of many is due to ignorance of the conditions under which such work is done. Those wholesalers or contractors who deliver the goods at the various establishments can, if they choose, keep informed concerning the sanitary condition of such places. But where the workers themselves call at warehouse, factory or shop for the goods, and return the finished garment in the same way, those who furnish the material have little actual knowledge of where or under what conditions the work is done.

SANITARY CONDITIONS.

Home work is at all times open to dangerous conditions seldom found in clean and sanitary factories. Sickness breaking out in a factory would be at once detected and removed; in the home it might remain undetected by the authorities until many garments had become infected and scattered among the buying public.

Where work is done in homes crowded with little children it is in daily danger of contact with contagious or infectious diseases common to childhood. In other places may come in contact with skin diseases due to peculiar diet or lack of cleanliness. If sickness does not exist in the immediate family where the work is done it can be easily brought from some adjacent place through neighborhood communication. And if actual sickness does not exist, the workers are often in undesirable contact with unsanitary outbuildings, stables, open drains, decaying vegetables and the like; and in the tenement districts of large cities these conditions are multiplied and aggravated to an extent almost beyond belief.

ARRESTED DEVELOPMENT.

Such then is the complete system of sweating with its attendant evils. Some economists claim that the sweated trades are cases of arrested industrial development, and find the remedy for them in a gradual absorbtion of all backward industries into the main current of industrial progress by having them pass through the necessary stages of machine production and be subject more and more to the pressure of public opinion and social control.

John A. Hobson in his Evolution of Modern Capitalism describes this class of work as "that which machinery is technically competent to perform but which it can not economically undertake so long as large quantities of very cheap labor are available." This he says comprises what is generally called sweat-shop work, the product of cheap, low-skilled, home-shop labor.

From the preceding discussion of sweating in the garment making industry it would seem that the theory of arrested industrial development applies very largely to it. The tendency of modern industrial life is to have the power, formerly supplied by man, replaced in an increasing degree by machinery. This is generally true of all classes of industrial production, but garment making offers an exception to the rule. In the great majority of establishments the machines used are still run by foot power instead of mechanical power. Some general reason must account for this, and wide investigation has shown it to be considerations of economy. In general, the profit gained by the smaller shops in added speed and increased output, if power were furnished, would not cover the cost of installing and maintaining such power, particularly when taking into consideration the dull seasons during which capital invested is bringing little or no return.

Further investigation shows that in those shops using foot-power the workers generally command no higher wages than where power is furnished. Therefore, as long as labor can be procured at a price below the additional cost of furnishing mechanical power, such work will be done by foot-power and that element of arrested industrial activity will continue to exist.

At present a great deal of work upon garments is done by hand which machinery is technically but not practically able to perform. Again, in some instances machinery has been invented to do a part of the work quicker and cheaper, but the public has found such machinery work less desirable both in appearances and durability. Therefore, it is of less value, and trade in the better class of garments demands that such work be done by hand. At the same time a part of the public, regardless of the time and manual labor expended upon it, is unwilling to pay much more than when the work is done by machine. Buttonhole making is a case in point. Such a situation, man competing with a machine, tends to keep wages down, although instances are found where employers are paying a higher price for the hand work on account of the scarcity of such workers.

SWEATING IN WISCONSIN.

A discussion of the sweating system in Wisconsin, as disclosed by the last investigation, will show that while the various elements of the system exist in the State and the number of such establishments is increasing, the last sweat shop law, enacted in 1901, which includes the shops and homes where garment making is carried on, can regulate those already in existence and prevent the addition of others whose sanitary condition would be a menace to the welfare of the workers and of society in general.

Sweating in the garment making trades is limited almost entirely to the city of Milwaukee. In other cities, such as Kenosha, Racine, Watertown, Appliton and Neenah, a limited number of cases were found where women took work from the factories to be finished in the homes; but the number was small, the conditions surrounding the work sanitary, and the hours not more than five or six a day. It often happened that such work was done only a few months during the year, so it seems hardly worth while to include them in the tables of this report. Suffice it to state, that home-work such as finishing women's ready made clothing, ravelling damaged knit goods, crotching, and finishing mittens, socks and sweaters is done to a limited extent in the cities named.

Two reasons are chiefly responsible for the fact that sweating in Wisconsin is limited almost entirely to Milwaukee. First, that city being the largest industrial center, has the greatest amount of those industries in which sweating is commonly found; and second, it contains the largest number of those people who drift easily into the home-shop work.

Milwaukee has a large, varied, and ever increasing foreign population, much of it from those countries of Europe where hand labor and the home shop is common, but as yet its industial and economic life is such as to give the stranger a chance to help himself rather than to sink him into the helplessness and wretchedness found in the congested portions of such cities as Chicago, Philadelphia, Boston or New York. The fact that the city is spread, over so much territory, and that the majority of the poorer people are housed in cottages, each with its surrounding plot of ground rather than in rows of old and dangerous tenements, gives some insight into the general condition surrounding the lives of these people. And the fact that the homes and shops where most of the so-called sweatshop work is done are not located in the heart of the city nor in its most crowded and unattractive quarters, but are scattered through the residence portion and toward the outskirts on the North, South and West proves that such work is not carried on in a district where tenements would be most apt to flourish.

The season of the year in which these places were inspected made some slight difference in the sanitary condition. In the winter and during the colder seasons when windows and doors were kept closed the ventilation in the larger shops was not as good as in the summer, when buildings were more or less open, admitting the sunlight and pure air. But around the homes and small shops the summer season was not always favorable to good sanitation on account of unhealthful conditions engendered by the heat.

A significant fact which the investigation brought out was that in general those establishments doing tailoring and those making crocheted garments, while by no means always the best, were usually among the neatest and cleanest premises in the neighborhood. And the conviction was often forced home to the inspector that poverty did not necessarily mean dirt, and that while many of the workers are poor, the energy and industry which prompted them to do this work also induced them to be clean. In sharp contrast to these, however, were some of the places where knit goods were finished. Several were dirty in the extreme, not the result of poverty and misfortune, but of natural habit and inclination. The nationality of the workers testified to this as did also the fact that when the four or five hours work for the day was done, no effort was made to clean up; instead, the leisure time was spent in neighborhood gossip over the back yard fence.

The fact that little sickness was found by the inspector was due largely to a comparatively healthy year with few epidemics. In addition to this, local physicians had warned families, seemingly ignorant or careless of the danger against taking in work while having sickness in the house. Some of the employers keep careful watch upon the places to which they send goods to guard against contagion or infection which would be dangerous to all who handle the goods, and decidedly injurious to their business. In order to secure safety to the public, daily or at least weekly inspection of many of these places would be necessary. Such a course is manifestly impracticable when one considers the number and scattered location of these establishments.

FOR WHOM WORK WAS DONE.

The work investigated in Milwaukee was done for ten tailoring establishments and eleven knitting factories of Milwaukee, and one tailoring establishment of Chicago, The investigation was carried on from September, 1903, until July 1st, 1904, and gave opportunity to note the varying conditions at different seasons of the year.

The places investigated numbered 840. In this number were included all the establishments inspected for the biennial report of 1901–1902, and in addition a new list which was collected in the fall of 1903 and early spring of 1904. It was believed that many on the old list might have gone out of business, but that a thorough investigation of all places on the records of the Labor Bureau would show, in a general way, whether sweating was increasing in Milwaukee or whether the new workers had practically taken the places of those who had stopped. The latter class will be disposed of at once in a general statement based upon an inspection regarding the size, location and condition of buildings in which work rooms had been located, and also upon such information as could be gained by conversation with the former workers.

A comparison of the number actually at work and those who had stopped, would seem to indicate that in the garment making industry, contract and homeshop work was decreasing. Nearly four hundred places were visted in which the occupants were found at work, and four hundred and forty-six where they had stopped. This statement, however correct, is misleading for many had stopped only temporarily, so that if this class were counted with the active workers it would show a slight increase for the knitting industry and a somewhat larger increase for the tailoring industry.

With regard to the term of idleness of those establishments which had stopped work it was impossible to make any detailed classification. It varied in the different cases from ten or twelve months down to three days. Some had stopped permanently; others temporarily for a definite period; and still others did not know whether they would begin the work again or not. The reasons for stopping had been many and various. Among those who had given up the work temporarily, housecleaning, spring gardening and the season for family sewing were the reasons most generally advanced. Others said there was not enough money made to pay for the work, the bother of getting the material, and the nuisance of having the half finished articles and the litter around the house. Some had had sickness in the family which put a stop to the work temporarily, and they had not cared to begin it again. A few had come upon more prosperous times and for that reason did not take in work. In many cases where the mother was the worker her time had become so occupied with family cares as to leave no part to be devoted to tailoring or knitting. And the remainder had taken up other lines of work such as mending bags or making nets.

These home workers move about a great deal, and so the cases of changed address were manifold and troublesome. Often inquiry around the neighborhood served to locate them or some one who knew of their whereabouts, and the inspector was obliged to follow them sometimes several blocks, sometimes into another quarter of the city, only to find that they had ceased working when they moved, and were uncertain whether they would work again or not.

When inquiry around the neighborhood failed to locate them, it was necessary to resort again to the manufacturer and have him procure the correct address the next time the worker came for material. The tailoring establishments and knitting factories delivering and collecting their own goods gave correct addresses, with few exceptions. Where workers came to the shop or warehouse for goods, the addresses given were not so reliable.

In general, the condition and surroundings of those no longer at work differed very little from those of the active workers. The majority of the buildings occupied were two story frame dwellings. In a few instances work-rooms had occupied tenements or apartments on the second floor of store buildings. Several had occupied separate shops.

The largest number of work rooms had been located on first floor, although some had occupied basements and a considerable number second floor.

Those rooms designated by the ocupants as work rooms were, usually, living rooms or kitchens, while the proportion of rooms used as separate work-rooms was small. Whether used as living rooms or simply as work rooms, they were in the large majority of cases connected with living rooms, but having direct entrance from the outside.

The sanitary condition did not vary greatly from that of the establishments at work, which according to the total number in each industry showed a larger proportion of unsatisfactory establishments in the knitting industry.

SYSTEM OF DISTRIBUTION.

The system of distributing the work in Milwaukee is, in general, that which appears in the industry elsewhere. The distributing agent is either the wholesaler or the contractor. Two different methods are employed in which the workers are directly responsible to the wholesaler. One is where the home workers go to the wholesale house for the goods, make the bargain with the dealer to do the work at a certain price per piece or dozen, take the goods home where it is made up, and return the finished garments to the wholesale house. In this transaction the middle-man does not figure at all, and only the profits of the worker have to come out of the price paid by the dealer.

The other method is through the existence of small shops owned by or rented by the wholesaler, and furnished by him with machines and all other things necessary for the complete equipment of a tailor shop. These shops are located in the residence portion of the city and differ only in management from the better class of contractors' shops. A superintendent is placed in charge with much the same authority as that vested in department superintendents in many of the large industrial establishments. He engages his own help, oversees their work, keeps their time, makes out the payroll, and pays them their wages which are sent through him from the wholesale house. He, himself, receives a salary by the week or month, and is held responsible for the sanitary condition and general management of the shop. Each shop is expected to do a certain amount of work each week, and any method of increasing the size and quality of the output without added expense makes the superintendent's position more secure.

The second method of distribution, which makes the contractor the distributing agent, is the one which includes the largest number of workers. Since to this middleman or contractor the name "sweater" was formerly generally applied, and is still in many cases, it is interesting to analyze conditions and see if he is the one responsible for any or all of the elements of sweating which appear in Wisconsin.

KINDS OF ESTABLISHMENTS—CONTRACTING.

Considering first the shop run by the contractor in which he employs outside help and from which he sends out goods to be finished by the home worker, we will be forced to conclude that he is as much the "sweated" as the "sweater." In the first place he is responsible for all work put upon the garments, which, when finished, must be entirely satisfactory to the wholesaler or they are returned to the contractor to be done over. Besides superintending the work of all his helpers he is generally one of the hardest workers in the shop, doing a part of the manual labor upon the garments himself. Often his profits are not much more than the wage of his best workers. It was stated by many contractors that unless they themselves worked the full ten hours a day they could not maintain the shop. An experience familiar to the inspector was to have the contractor measuring, cutting, sewing or pressing while trying courteously to answer questions relating to the business. Any remark about the fact brought forth the answer, "I've got to work, or starve." This answer may have been the fruit of discouragement, and somewhat exaggerated, but his actions showed it was not without foundation.

Besides the pressure brought to bear upon him by the demands of his business, his establishment comes under State inspection and is subject to the strict regulations of all factory laws which apply to workshops, and to the regulations of an efficient sweat-shop law. This latter law requiring him to procure a license for the room or apartment to be used for manufacturing, altering, repairing or finishing of garments, and regulates the number of persons who may be employed therein, such number to be determind by the air space contained in the room, allowing 250 cubic feet for each person employed during the day, and 400 for each person employed during the night. This permit shall be issued only when such room or apartment has suitable light during the hours when people are employed therein.

The law also regulates the provision of separate toilet rooms where there are ten or more persons employed and three or more are of different sex. It gives authority to the commissioner of labor or any factory inspector to require, when he deems it necessary, that all rooms used for manufacturing, altering, repairing or finishing garments shall be separate from and have no door, window or other opening into any living or sleeping room; and when any such room is above the first floor he may order a separate and distinct stairway leading thereto.

The law requires that all rooms shall be kept in a clean and sanitary condition at all times, and vests the Cimmissioner of Labor and the factory inspectors with power to require such changes in cleaning, painting or whitewashing as they deem necessary. It provides for the proper heating and lighting of rooms, and for the ventilation by ordinary, or if necessary, mechanical appliances. It requires that all garments therein manufactured shall be clean and free from vermin and every matter of contagious or infectious nature. If the Commissioner of Labor or any factory inspector finds that any contagious or infectious disease exists in any shop or house where garments are manufactured or finished, and such garments are infected and unfit for use, he shall report to the local board of health and such board may condemn and destroy all such infectious articles manufactured or in process of manufacture.

The law also requires that any person, firm or corporation, by themselves or by their agents or managers contracting for the manufacturing, altering, repairing or finishing of garments shall keep a register of the names and addresses, plainly written in English, of the persons to whom such work is given. This register shall be subject at all times to the inspection of the Commissioner of Labor or any factory inspector, and a copy of the same shall be furnished at his request.

No owner, lessee or agent of a tenement or dwelling shall permit its use for purposes of garment working contrary to the requirements of the sweat-shop law. Unless such work is discontinued within thirty days after notice has been served upon the owner, lessee or agent he shall be deemed guilty of a violation of the law as if he himself were engaged in such unlawful manufacture. When the Commissioner of Labor or any factory inspector finds rooms not kept in clean and sanitary condition he may refuse to grant a license, or revoke the license already granted, and no person, firm or corporation shall contract with such worker for the manufacture, altering or repairing of goods.

Thus it is plain that the law covers all persons and places concerned. It prevents the wholesaler from sending out goods, the worker from receiving goods, and the owner of the building where such work is carried on from permitting such use of the building, unless the requirements of the law are met, as enforced by the Commissioner of Labor or any factory inspector. This law, of course, applies to all places where garments of any kind are manufactured or finished which shall afterward be exposed for sale. Its requirements are strictly enforced in those places where work is taken into the home. The danger here arises chiefly from the naturally unclean habits of the family and the possibility of disease springing up, rather than from unsanitary conditions produced by overcrowding of workers.

On the middleman or contractor, who keeps a shop or workrooms and hires outside labor, it applies in all its parts and in all its force. These men, on account of the size of their establishments are far less apt to move about than the single home-worker, and so are under the constant watch of factory inspectors. The number of people who may be employed by them in shops depends upon the size of the work rooms. That these contractors are not overcrowding their employes is proved by the fact that in not one establishment were there as many as allowed by law. Since they have workers of both sexes they are required by law to provide a proper number of sparate closets and keep them in a clean and sanitary condition.

Working upon woolen garments necessarily causes an accumulation of scraps, thread and lint which strews the floor giving an untidy appearance. But in nearly all cases the floor was swept once a day and in some cases twice. The majority of the regular shops have hard wood floors which are easily kept clean and as the shops are smaller than the ordinary factory the floors are generally scrubbed oftener. It is the custom with most of the contractors to use the dull season, when the shop is idle, as general house-cleaning time.

In none of the shops were the regular hours more than ten a day. Some reported working a half hour over time during the busy season, for which work they were usually paid by the piece.

In all of the shops women and girls were provided with chairs which were very necessary in the work. As it is to the advantage of the employer to have his work done as quickly and as well as possible, nearly all provided sufficient light for the workers. In a few cases it was necessary to order windows cleaned, and additional artificial light for the late hours of winter afternoons.

Along with the original contractor there exists in Milwaukee the sub-contractor, although the number of such agents is small. The largest establishment run by a sub-contractor was a shop making buttonholes on coats, vests and trousers, doing work for many of the contractors, and a few of the wholesale houses. The buttonholes were made by machines run by foot power. The shop gave employment to four men and three women. Another instance of sub-contracting was that of a custom tailor who maintained a small shop and who made buttenholes by hand for a contractor's shop. A third instance was that of a young woman who hired girls to work on backs of vests for a contractor's shop.

Although contractors and sub-contractors exist in Milwaukee the yare not the cause or even a necessary part of the sweating system. Scattered about the city and dwelling in all conditions from comfort down to the most pressing poverty is the class of home workers before mentioned who never come in contact with a middleman, but deal directly with the wholesale houses, getting the cut garments there or receiving them from the wagons sent out by the wholesale house, making them up, returning them the way in which they came, and receiving from the wholesaler payment by the piece. Whatever the price paid, whatever the hours, and whatever the conditions surrounding these workers the middleman is in no way responsible for them, because in these transactions he does not exist. In the homework of the knitting industry, where wages were uniformly low and where the greatest per cent. of unsanitary establishments were found, the workers dealt directly with the factories and no contractors existed.

The fact that contractors do exist in any industry and are willing to act as middlemen may serve in a measure to keep the sweating-system flourishing for it is a question whether the wholesale houses would be willing to go to the inconvenience of dealing separately with the same number of individuals that now work collectively in the contractors' shops. It is very certain that they could not find a number of skilled tailors who complete a garment, equal to the number who now work upon their goods in the tailor shops, each doing, perhaps, a single operation and few being able to make a complete garment.

The contractor, therefore, acts only as a convenient agent to bring work and worker together. General compliance with the labor laws prove him not the lawless devouring monster which public opinion has so long painted the "sweater," one who seeks out the poor and helpless, herds them in unsanitary old buildings, and works them unreasonably long hours. Whatever the wage paid to his workers it is a safe criterion of his own earnings in an industry in which values are so closely estimated. A comparison of the earnings of workers in contractor's shops, of workers who finish garments at home for contractors, and of workers who deal directly with the wholesale houses without the intervention of the middleman, no great difference is apparent. In fact, in the knitting industry where contractors were not employed, the wages were the lowest found and the conditions prevailed throughout the industry wherever home work was done.

Therefore, although the contractor and the sub-contractor exist in Milwaukee they can not be held responsible for the sweating system. Since they do not exist in all industries nor in all cases in any particular industry they can be considered only as a part of the system and not the cause.

In general the class of workers in the garment making industries of Milwaukee is of a higher grade than that in many of the larger cities. While making no comparison of the general intelligence of the two classes, it is safe to say that the workers in the tailor shops, with the exception of a few old men at work as pressers, do not differ in physical appearance from those found in factories. The boys and young men employed were able bodied workers, not as is too often the case in the typical sweat-shop, men who are crippled and have lost better work when losing health and hope. The old men were chiefly Bohemians, Poles or Russian Jews, who had worked as tailors in their native country and who clung to it now as the only work they knew. The girls and women were, for the greater part, between sixteen and thirty years of age and did not differ from the factory workers. In fact, they are of the same class, and often change from shop to factory and from factory to shop. The number of workers below the age of sixteen was small. Contractors gave as the reason the statement that they were not as quick and careful about the work as older girls, and while they worked cheaper, employing them was not profitable.

The home workers were of a different class. The proportion of men working alone was small. Most of those who did tailoring had shops of their own or else worked in the shop of a contractor. The women taking work home were for the greater part those with families. Sometimes it was a woman whose husband earned good wages in a factory and did not want his wife to take in work, but she, being of an industrious turn, wished to add to the family income by doing such work while her husband was at the factory and the children were in school. Sometimes it was a widow with several children to support, who, of necessity, had to resort to work which could be done at home, giving her an opportunity to prepare meals and care for the children when they were out of school.

A few cases were found where young women were doing tailoring or knitting at home in preference to working in a factory or store, but the majority preferred to work in shops. No childen under fourteen were kept from school to work in the tailoring industry and only a few such cases were found in the knitting industry. In several instances children assisted after school hours at threadig needles and sewing on buttons.

The men and women doing work directly for the wholesale tailoring houses were those who had learned the trade and performed all the work upon the completed garment, machine sewing, hand sewing and pressing. Those who worked for tailor shops performed only a few of the processes, no single person making a complete garment. Of the latter class, those who finished trousers were the most numerous. They were generally women between thirty and forty-five years of age.

Only a limited number worked ten hours daily and were the ones who supported themselves entirely by such work. Th majority finished from three to six pairs of trousers daily and worked less than six hours. These women depended for the remainder of their support upon the labor of husband or children or upon an income from house rent.

The women employed by contractors to work at home on vests are few. Their work consisted of sewing on buttons, making buttonholes or making backs. Making backs required no basting, and in the hands of a practical worker occupied about six or seven minutes for each garment. One woman, who worked nine hours daily, said that at first she could make only forty in nine hours, but after two months practice could make ninety.

The finishers of coats divided into two classes, those who did hand work such as felling, and those who did machine work such as putting together outsides and sewing in pockets. Each took about half an hour to a garment. When asked why they chose this work several women said that they had formerly done dress-making, and while tailoring did not pay as good a price, they preferred it because there was less annoyance about it and the pay was more regular and sure.

Few of the finishers worked in the evening and those who did said it was only when they did not have time to sew during the day. Two establishments were found which delivered work to the finishers. One pair a half cent less for the work on each garment so delivered. In the cases where women called at the shops for the garments much time was often lost waiting for the proper number to be made up and ready for finishing. Some industrious German women carried their knitting along and employed the time that way, while the others waited idly.

Wages paid to finishers in the tailoring industry were determined by the quality of goods and the amount of work upon each garment. Naturally the contractor gave out the finest and highest priced garments to his best workers whose higher wage was due to the better quality and greater amount of work which the garments required.

However, in all cases it was apparent that the bargain driven was close, a slight difference in the amount of work on different garments making a difference of a cent or half cent in the price per piece.

The home work in the knitting industry has several distinct characteristics. In all of the cases investigated the workers dealt directly with the factories, and not through contractors. With the exception of finishing sweaters, all of the work was done by hand. This differs, of course, from the tailoring industry where much of the work is done with sewing machines. And nearly all of the work on knit goods is done in living rooms or kitchens, only four out of one hundred and seventy-seven establishments using work rooms only.

These workers divided naturally into crocheters and finishers. The former are those who crochet entire garments, such as hoods, shawls, jackets, bootees, etc. The latter are those who finish, by hand, garments for the greater part machine knit, such as mittens, stockings, gloves, sweaters, and woolen jackets.

Those women making crocheted garments were, with three exceptions, of German birth or parentage. German skill in knitting is a well known fact and was made very apparent by this investigation. Many of the women had learned the art in Germany while others had been taught in this country by the preceding generation. Sometimes the worker was an old grandmother, almost blind, sitting in her rocking chair and crocheting throughout the entire day. Often the workers in a neighborhood congregated in one place and the inspector would come upon three or four middle aged women sitting on some back steps visiting voluminously in German and crocheting diligently. In other places the worker was often a young woman who wished to earn a little money but did not care to go away from home to work. Occasionally a little girl was found crocheting for a few hours after school and on Saturdays. In hand knitting and crocheting the ages of workers varied more than in any other line of home-work investigated.

The greater number spoke of it as "pick up" work, something to keep the hands busy during leisure hours, and few had ever tried to see how much they could do in a day. Only a limited number were earning their entire living by it and these were the skillful, rapid workers who after five, six, or even twelve years of practice were able to earn only ten cents an hour. These women had steady work six days in the week throughout the year. They worked regularly ten hours a day making garments of most intricate stitch and pattern, only occasionally glancing at the sample or the work. When asked if the work was tiresome they said that although they did not have to look at it carefully, it was wearing and nervous work, and particularly tiresome to the arms and wrists.

Those places where knit goods were finished seemed, with a few exceptions, to be of a different class. Crocheting was of itself clean work and the delicate colored yarn had to be kept clean, while the people doing the work were naturally neat and industrious. On the other hand, the work of finishing was more or less disorderly on account of the lint, ravellings and clippings constantly accumulating on tables, chairs and floor, while the majority of establishments doing this work indicated that the habits of the occupants were not conducive to cleanliness. The work of crocheting was usually carried on in the most attractive and comfortable places available. Finishing of knit goods was generally done in some uncarpeted room such as dining room or kitchen where the scraps could be swept up easily from the bare floor. It was sometimes a question with the inspector whether the house was getting the garments dirty or the garments the house.

A description of one of the establishments found unsatisfactory will give a general idea of the worst ones. This particular one was a place where mittens were finished. The house, a two story frame structure, was situated near the city limits in a small yard surrounded by a dilapidated picket fence. The yard was used as a pen for geese and goats. In the first story, or basement, (the floor was about six inches below the level of the ground) was located the workroom. Here the inspector found a healthy looking woman clad in soiled and repulsive clothing, and surrounded by four small children equally dirty and unkempt. On learning the inspector's business, the woman with good natured exclamations of surprise and curiosity offered her a chair from which crumbs and jam were first hastily wiped. A rapid glance served to note the contents of the room. In the rear stood a cook-stove, a sink, a table with the remains of dinner and a pile of unwashed dishes. Near the stove was a pail of garbage. In the front of the room was another table covered with a cloth, at which the woman had been working. On the bare and dirty floor were children's garments and playthings, a basket of kittens, a dog-collar and chain, numerous bread crusts, and five or six dozen woolen mittens upon which the woman had been working. Conversation with the worker elicited the information that the family owned the home in which they lived, that the woman's husband earned forty-two dollars a month, that there were two older children in school, and that the reason the mother did this work was because she "had nothing to do all day." To the inspector it seemed that there was a good deal to do immediately. Inspection of the house showed on the upper floor a comfortable and clean (because unused) sitting room which would serve very well for a work-room and to it the work was ordered removed immediately. On descending to the lower floor the inspector found that the goats had wandered in through the open door and taken possession of the workroom. They were driven out by the woman with some impatience but no show of surprise; and the incident, while somewhat interrupting the inspection had its value in disclosing the habits of the family.

Two knitting factories delivered and collected goods. The rest required all workers to call for them at the factory. The more work done in a day, the larger and heavier was the bundle to be carried. In cases where the distance was too great to be walked, the worker had to spend in car-fare the entire earning of an hour and a half each day.

The fact that the greater part of the work of finishing knit goods was done by Polish women was due largely to the factories sending out such work being located in or near the territory occupied by that nationality.

IRREGULARITY OF WORK.

Since work in the garment making industries depends largely upon the seasons, the irregularity of work is one of the greatest evils of the sweating system. This irregularity is strongly felt by the garment workers in Milwaukee. Few of the shops or homes have steady work the year around although some reported that they were never laid off. This was only among the single workers and small shops employing a few hands. They were also among those longest in the employ of the firm and doing the finest work. Several women reporting steady work added, concerning the employer, "He knows I need the work and so I get it when many others are laid off." But by far the greater number of workers and those in the larger shops reported from several days to two or three months enforced idleness throughout the year. In some instances the hands were laid off and the shop temporarily closed until business improved. The interim was generally spent by the employer in a sort of general house cleaning, washing windows, floors, and ceilings, and painting, whitewashing and repairing the building.

An effort was made to ascertain what use was made of the time by the workers. The men stated that they simply lay idle or secured such temporary employment as they could get which was usually manual labor. The women and girls secured places in stores or factories or did housework. Contractors stated that most of the men returned to their old places but that if he shop remained closed too long the girls and younger women secured work in other industries and remained there.

This irregularity seems to be one great reason why the contract system has held its own so long in the garment making trades. The wholesale dealers realize that it favors cheapness and convenience. Large factories can not remain idle even for a short period without serious loss. They have usually a more expensive building and machinery rents are generally higher, so the loss on the investment is greater than in the small shops. Those contractors employing only a few hands and using a part of the house as work-room can stop work and discharge the hands at any time, without incurring any loss in rent or capital invested. Those contractors owning or renting a fair sized shop lighted by electricity, heated by steam or furnace, and using gas or electricity to run machines and brushes, probably according to their financial condition, feel the loss entailed by idleness as much as, if not more than, the owner of a large factory.

The question of irregularity of employment brings out another condition in which the small shop has the advantage, that of securing workers. This often causes great effort and trouble which the wholesaler is glad to escape by employing the contractor or middleman. Since this agent is himself one of the workers, he is usually in communication with such other workers as he needs. And since the small shops are generally scattered about the city among dwelling houses and in the residence portion, rather than in the manufacturing districts, the contractor living near his shop, lives near his workers. Being acquainted with them and having his shop in the neighborhood of their homes, makes it easier for him to find them, and to hold them even through the periods of idleness.

During the periods when work is slack many of the large shops shut down entirely. Others employ less help and work full time. Some work ten hours daily three or four days a week. Others work from five to seven hours daily, the full week of six days. The conditions varies according to the shop in question.

WAGES.

Aside from the more remote influences that affect wages in any occupation, the two most potent in the garment making industry are the supply of labor, and competition between employers. The careless investigator is apt to adopt the conclusion reached by men in other times and places and hold the contractor responsible for low wages and all other attendant evil conditions, heaping upon him all the odium which has attached itself to the name "sweater." But the responsibility begins farther back than that. Admitting that each should bear his share, one can trace it through contractors, wholesalers and retailers, back to the purchasing public. In every case the bargain driven is close. The majority of the purchasing public goes where it can get an article cheapest. The retailer buys of the wholesaler who gives him the most for his money. The wholesaler in turn goes for his work where the particular grade is made cheapest. And the contractor places the scale of wages at the lowest point at which labor can be secured or at a higher point which will secure more efficient labor and add to his profits in an increased output of finer quality.

Thus it is plainly evident that the three agents, retailer, wholesaler and contractor, who cater to the wants of the purchasing public, are all subject to the grinding force of competition, and each in turn tries to keep the buying price or cost of production as low as possible, in order that he may underbid some competitor and sell at the lowest price. Where this competition is strongest it shoves the cost of production down to the lowest possible point and the wages paid to labor will be the lowest at which that labor can be secured. At this point the laborer himself begins to regulate wages and the scale will depend upon the number and the relative low skill and helplessness of the workers.

Generally, any industry which would exist and grow is forced to adopt the methods of the well established and older firms.

Some employers, wishing to consider the comfort and welfare of their workers may provide sanitary workshops and labor saving machinery, may deliver the goods and may observe reasonable hours, but at the same time be confronted by the low price paid for labor by some other firm and in that one particular be forced to adopt the same standard or find themselves undersold.

Competition is not limited to the struggle between local dealers. Conditions existing in the sweated industries in eastern cities affect conditions in Wisconsin. Wholesalers here have to compete with goods put on the market by eastern houses. If the cost of production here were to rise above the cost of eastern goods and the added cost of transportation, eastern manufacturers could undersell the local dealer, or at any rate bring the margin of profit down so low that capital would be withdrawn altogether. That this is true in the tailoring industry is generally acknowledged. It is also true in the knitting industry, particularly where garments are made entirely by hand. A manufacturer of knit goods in one of the northern cities stated that he contracted with a dealer in Philadelphia for all hand knit or crocheted articles, since the class of women able to do such work did not live in his locality. He also stated that the price paid for the work by the contractor in the East was shockingly low.

Allowing for the usual difference between men's and women's wages, the variation in the scale of wages at a given time in the tailoring industry in Wisconsin represents a variation in the quality and amount of work done upon a single article or in a certain length of time. Investigation showed that both wholesaler and contractor used this basis for a scale of prices. The quality of the goods was an indication of the work. Several people working upon the same quality of goods received the same price per piece. One person working upon two or more qualities of goods received for each a different price depending upon the amount and quality of the work. When wages were paid by the piece it is evident that the amount earned in an hour varied greatly with the skill and rapidity of the worker.

In the knitting industry the average wage was decidedly lower than in the tailoring industry and the scale was by no means as carefully drawn. While workers in the latter class received different prices for different qualities of garments, nearly all said that the amount to be earned in a given time was practically the same. In the knitting industry nearly every worker stated that while the scale of wages varied with the amount of work on an article it was far from being correctly adjusted. Some workers declared that on some articles they were able to earn only five cents an hour while on others which "went faster" they were able to earn seven or eight. The amount earned by a particular worker in a given length of time varied with the kind of work which she received. When asked why they chose the work which paid the poorest the general answer was, "Well, I did not choose this. I would rather have the other but there was none ready so I took what I could get. I like to have something around for 'pick up' work." And so these women who crochet or knit for diversion and are not obliged to earn their own living, aid in keeping down wages for those who do support themselves. Of course the general low wage of knitters is largely due to competition between man and machinery; but a class of people in a community who are willing to work for the low wage aggravates the evil.

COMPILATION AND ANALYSIS OF STATISTICS.

In this report no tables are furnished showing the number and size of windows. A record of all licenses issued contains this information for reference, but a table would scarcely represent the true condition of lighting which is largely affected by the cleanness of the windows, the color of the interior of the rooms, and the location of the work-rooms with regard to adjacent buildings.

A large proportion of the regular shops are roomy and extremely well lighted. Those buildings built expressly for tailor shops are furnished with windows on four sides almost as closely as window frames can be set in the walls. The shops which occupy store buildings have glass fronts and windows at the side or back. This of course does not furnish as good light but in all cases it was pronounced satisfactory by the workers. The workshops occupying rooms in dwellings have the fewest windows and least light as is natural in an ordinary dwelling house. In these home-shops, however, there are fewer people to a room, so it is possible for them all to work near windows.

The three cases found of insufficient lighting were in a dwelling where one woman worked on vests, a shop where six people worked on vests, and a shop where thirty-one people worked on coats.

In a large proportion of the workshops the entire ventilation is also furnished by the doors and windows. However, the number of windows is by no means always a safe measure of the ventilation, because the most distressing need of ventilation was found in a large shop whose walls were closely set with windows which, during the winter months, were all tightly closed. The air in the shop, besides being exhausted by many workers, was made more unwholesome by the steam and odors arising from pressing garments and tobacco fumes from the pipes of several of the workmen.

With regard to the cubic feet of air space to each worker in the rooms occupied as workshops the investigation showed no violations of the law requiring two hundred and fifty cubic feet during the day and four hundred during the night. In fact, not a single shop had the full number of workers which its air space allowed, and in the work rooms in dwellings the amount of air space to each worker was generally from three to five times the amount required by law.

Few establishments had any ventilation other than that furnished by doors and windows. The cases of mechanical ventilation numbered 6 in all, 3 being in trousers shops, 1 in an overcoat shop and 2 in coat shops.

As previously stated, the total number of places inspected from September, 1903 until July, 1904, was 840, and of these, the number of places where occupants were found at work at the time of inspection was 394. Of this number, the tailoring industry included 217, and the knitting industry, 177.

Only those places where work was being done and where full information was obtainable are treated of in the tables. The

446 remaining are not included because not actively at work and presenting no new conditions.

There is also omitted from the tables one establishment making buttonholes exclusively. The work was done by machine in a shop running 10 hours daily and employing four men and three women.

In the classification and analysis of tables the tailoring and the knitting industries are treated separately. While each includes the home worker and other elements of sweating, they differ in many important respects.

TAILORING INDUSTRY.

TABLE I.

Industries, establishments, employes.

INDUSTRIES.	ESTABLISHMENTS.		EMPLOYES.	
	Number.	Per cent.	Number	Per cent
Trousers	86	39.7	328	23.1
Coats	62	28.6	630	44.5
Vests	45	20.8	135	9.5
Overcoats	15	6.9	286	20.2
Overalls	3	1.3	3	.2
Jumpers	2	.9	2	.1
Shirts	4	1.8	34	2.4
Total	217	100.0	1,418	100.0

In the preceding table it is seen that the places included were classified as follows: Trousers, coats, vests, overcoats, overalls, jumpers and skirts. This does not strictly conform to the actual situation for in a few places, more than one kind of garment was made. In some places coats and overcoats were made; in others, overalls and jumpers. Shops turning out a mixed product are classified with the one of largest output.

Each place, regardless of size and number of persons employed is regarded as an establishment and so classified. The total number of places included is 217. Of these, 86 or 39.7 per cent turned out trousers, 62 or 28.6 per cent were making coats, 45 or 20.8 per cent were making vests, 15 or 6.9 turned out overcoats, while 3 places making overalls, 2 making jumpers and four making shirts comprised the remaining 3 per cent.

In the 217 establishments 1,418 persons were employed. The largest proportion of these were employed in making coats, although trousers which employed 328 persons or a little over half as many, had a larger number of establishments. Next came overcoats with 286 people employed, and vests with 135. Overalls, jumpers, and shirts employed 39 people or less than 3 per cent of the total number.

A classification of persons employed in each establishment gives the following results:

TABLE II.

Relative number employed in each establishment.

	One person.	2—5 inclusive.	6—10 inclusive.	Over 10.	Total.
Trousers	55	19	3	9	86
Coats	12	17	8	25	62
Vests	28	12	2	3	45
Overcoats	....	....	....	15	15
Overalls	3	....	....	....	3
Jumpers	1	....	1	1	4
Shirts	2	....	1	1	4
Total	101	49	14	53	217

Here it appears that of the establishments included, 101 or 46.6 per cent had only one person each; 49 or 22.6 per cent had 2 to 5 persons inclusive each; 14 or 6.4 had 6 to 10 persons inclusive each; and 53 or 24 per cent had over ten persons each. The largest number employed in any establishment at the date of inspection was 51.

Classified with regard to the number of male and female employes in each industry, the following tables are given:

TABLE III.

Number of male and female employes in tailoring industry.

Industries.	Male.	Female.	Total.
Trousers	55	273	328
Coats	192	438	630
Vests	23	112	135
Overcoats	76	210	286
Overalls	....	3	3
Jumpers	....	2	2
Shirts	4	30	34
Total	350	1,068	1,418

TABLE IV.

Per cent. of males and females in each class.

Industries.	Per cent males.	Per cent females.	Total.
Trousers	16.8	83.2	100.00
Coats	30.5	69.5	100.00
Vests	14.8	85.2	100.00
Overcoats	17.0	83.0	100.00
Overalls	...	100.0	100.00
Jumpers	...	100.0	100.00
Shirts	11.8	88.2	100.00

Considering the total number of employes, 1,418, it is found that 1,068 or 75.3 per cent are females and 350 or 24.7 per cent are males. In these industries the females greatly outnumber the males. The per cent shows that of every 100 employes, one-fourth and men and three-fourths are women. This is the situation when the total number is considered.

Taken separately the different industries show a different proportion. In the class making trousers the proportion of males is less, being 55 or 16.8 per cent, to 273 or 83.2 per cent females. In coats the proportion of males is greater, being 192 or 30.5 per cent, to 438 or 69.5 per cent females. Overcoats rank next with 76 males to 210 females. Vests employ 23 males and 112 females, and shirts employ four males and 30 females.

Those establishments inspected which made overalls and jumpers, employ only women.

The next table deals with the young persons and children employed in tailoring establishments and also shows the number between fourteen and sixteen years who were not provided with proper permits.

TABLE V.

Number of young persons and children in tailoring industry.

Industries.	16-18 years.	14-16 years.	Uuder 14 years.	Without proper permits.
Trousers	46	17	...	11
Coats	89	46	...	22
Vests	17	15	...	12
Overcoats	39	23	...	12
Overalls	...	...	...	...
Jumpers	...	...	...	...
Shirts	6	2	...	...
Total	197	103	...	57

Out of 1,418, the total number of workers, 197 or 13.6 per cent were between sixteen and eighteen years of age and 103 or 7.3 per cent were between fourteen and sixteen years of age. No children under fourteen years were employed in the tailoring establishments.

Coat making employs the largest number of young persons between sixteen and eighteen years and also between fourteen and sixteen years, in both cases about double the largest number employed in any other line. This, however, is not of particular significance as its total number of employes is about double the largest number employed in any other line. In the number between sixteen and eighteen years, trousers stand next in order to coats, followed in order by overcoats, vests and shirts. In the number between fourteen and sixteen years, overcoats with 23 stand next in order to coats, followed in order by trousers, vests and shirts. In the home workshops inspected, overalls and jumpers employed none under eighteen years of age.

Of 103, the total number between fourteen and sixteen years of age, 57 were not provided with proper permits. Several of these were working on old affidavits previously required, and a few were employed without permits of any kind. The affidavits were collected and the children discharged until proper permits were secured.

The two following tables deal with hours of labor.

TABLE VI.

Classification of hours of labor daily and the number of establishments in each class.

Industries.	8 hours.	9 hours.	10 hours	Irregular but less than 10.	Total.
Trousers	1	1	16	68	86
Coats	1	1	41	19	62
Vests	1	2	12	30	45
Overcoats	....	1	14	....	15
Overalls	....	....	2	1	3
Jumpers	....	....	....	2	2
Shirts	1	1	....	2	4
Total	4	6	85	122	217
Per cent.	1.8	2.8	39.2	56.2	100.0

Of the 217 establishments considered, 4 were working regularly eight hours a day; 6 were working nine hours, 85 were working ten hours and 122 were working irregularly, but less than ten hours. Of this 122 or 56.2 per cent, many were establishments with only one worker. A large number of these stated that their hours were often only five or six a day, but as none were over ten, only the one irregular division is made.

The greater proportion of all the regular shops or places where others besides the proprietor were employed were in operation ten hours daily. None reported more than ten hours as the regular schedule, although some reported working a half hour over time during the rush season. In all such cases investigated the employes were paid by the piece or by the hour for the extra work. The table shows that over half of the total number of establishments have irregular working hours.

Table VII is a classification of the number of hours of labor daily and the number of employes in each class, and by comparison with Table VI gives a more correct idea of the condition with regard to hours of labor and the reason for the irregularity.

TABLE VII.

Classification of hours of labor daily and the number of employes in each class.

Industries	8 hours.	9 hours.	10 hours.	Irregular but less than 10 hrs.	Total.
Trousers	11	6	172	139	328
Coats	7	16	533	74	630
Vests	6	25	60	44	135
Overcoats		14	272		286
Overalls			2	1	3
Jumpers				2	2
Shirts	22	10		2	34
Total	46	71	1,039	262	1,418
Per cent.	3.2	5.0	73.5	18.3	100.0

Of the 1,418 employes, 46 or 3.2 per cent were employed eight hours daily; 71 or 5.0 per cent were employed nine hours daily; 1,039 or 73.5 per cent were employed ten hours daily; and the remaining 262 or 18.3 per cent were working irregularly less than ten hours daily. It appears from these two tables that 39.2 per cent of the total number of establishments contained 73.5 of the total number of employes and were in operation ten hours daily, while 56.2 per cent of the establishments, working irregularly, contained only 18.3 per cent of the total number of employes. Of those working ten hours, coat and overcoat workers comprised the greater number, because this work is done almost entirely in shops. Next in order are trousers with 172 employes in 16 shops, and vests with 60 employes in 12 shops.

The greatest number of those working irregular hours were employed on trousers. Irregularity of hours is found chiefly among the home workers, and this branch of the tailoring industry lends itself most readily to the demands of the home workers, because these garments are more easily carried about and also require a greater amount of hand work called "finishing." The fact that 68 establishments working irregularly contained but 139 employes with an average of about two for every establishment marks the home workshop. Next in order are coats with 74 employes in 19 establishments, vests with 44 employes in 30 establishments, and overalls, jumpers and shirts with 5 employes in as many establishments.

TABLE VIII.

Kinds of power used.

Industries.	Electricity.	Gas.	Foot.	Hand.	Total.
Trousers	1	4	35	46	86
Coats	2	1	56	3	62
Vests	....	....	43	2	45
Overcoats	....	3	12	....	15
Overalls	....	....	3	....	3
Jumpers	....	....	2	....	2
Shirts	....	1	3	....	4
Total	3	9	154	51	217
Per cent.	1.4	4.5	71.0	23.5	100.0

Table VIII deals with the kind of power used in tailoring establishments. It appears that 3 or 1.4 per cent used electricity; 9 or 4.5 per cent used gas; 154 or 71.0 per cent used foot power and 51 or 23.5 per cent used no machinery, doing all the work by hand. This last class represents finishers exclusively. Of the establishments using gas or electric power, trousers included five, coats and overcoats three each, and shirts one.

TABLE IX.

Kind of building used.

INDUSTRIES.	Wood—Stories high.					Brick—Stories high.				
	1	1½	2	2½	3	1	1½	2	2½	3
Trousers	24	15	40	4	1			2		
Coats	19	6	30	1	2			3		1
Vests	8	6	26	5						
Overcoats	7		8							
Overalls	1		2							
Jumpers	1		1							
Shirts	2		2							
Total	62	27	109	10	3			5		1

Table IX shows the kinds of buildings used by the establishments in question. Of the 217 buildings, 211 were of wood and 6 of brick. Of the wooden or frame buildings 62 were one story high; 27 one and one-half stories; 109 two stories; 10 two and one-half stories; 3 three stories. Of the brick buildings 5 were two stories and 1 three stories. Practically all of the buildings were separate structures and as none were very high it was possible to have plenty of light and air in all of the work rooms.

TABLE X.

Purpose for which building as a whole was used.

Industries.	Tenement.	Dwelling.	Shop.	Dwelling and shop.	Total.
Trousers	1	72	10	3	86
Coats	1	23	31	7	62
Vests		38	5	2	45
Overcoats			12	3	15
Overalls		3			3
Jumpers		1		1	2
Shirts		2	2		4
Total	2	139	60	16	217
Per cent.	.9	64.1	27.3	7.7	100.0

Table X shows the purpose for which the buildings as a whole were used. Of the 217 buildings occupied 2 or .9 per cent were tenements, 139 or 64.1 per cent were dwellings, 60 or 27.3 per cent were separate shops and 16 or 7.7 per cent were chiefly stores or shops with living rooms in the rear or above. The fact that .9 or less than 1 per cent of the garment making is carried on in tenements shows that this industry in Milwaukee is practically free from the tenement evil which is such a serious problem in many other cities.

TABLE XI.

Part of building occupied by work rooms.

Industries.	Basement.	1st floor.	2d floor	3d floor.
Trousers	12	67	12	
Coats	10	50	6	
Vests	4	38	4	
Overcoats		12	4	
Overalls		2	1	
Jumpers		2		
Shirts		4		
Total	26	175	27	

Table XI shows what part of the building was occupied by the work rooms. Wherever the floor of the lower story was at all below the level of the ground it was classed as basement. Of the 217 establishments, 26 used basement rooms, 175 used first floor rooms and 27 used second floor rooms. Two coat shops used the basement for pressing rooms, and first floor for sewing room, while two others occupied both first and second floors. Four trousers shops located on first floor used the basement for pressing room, while one occupied both first and second floor. One vest and one overcoat shop each occupied both first and second floors.

Table XII deals with the kind of rooms used by the various tailoring industries.

TABLE XII.

Kinds of rooms used by various tailoring industries.

Industries.	Work rooms only	Living room.	Bed room	Kitchen.	Total.
Trousers	20	38	1	27	86
Coats	46	16			62
Vests	16	16		13	45
Overcoats	15				15
Overalls		2		1	3
Jumpers		1		1	2
Shirts	2	2			4
Total	99	75	1	42	217
Per cent.	45.5	34.6	.5	19.4	100.0

From this table it will be seen that of the total number, 99 or 45.5 per cent were used simply as work rooms; 75 or 34.6 per cent as living rooms, sitting rooms sitting rooms without bedding or cooking utensils; 1 or .5 per cent as bed-rooms; and 42 or 19.4 per cent as kitchens.

Analysis of the table shows that coats and overcoats were made chiefly in shops, 100 per cent of the overcoat establishments being used as work rooms only. The greatest proportion of trousers and vest establishments were used as living rooms or kitchens. As before stated these are the garments which lend themselves most readily to the capacity of the home worker.

TABLE XIII.

Work rooms connected with and not connected with living rooms.

Industries.	Not connected.	Connected.	Total.
Trousers	20	66	86
Coats	42	20	62
Vests	16	29	45
Overcoats	15	....	15
Overalls	....	3	3
Jumpers	....	2	2
Shirts	2	2	4
Total	95	122	217
Per cent.	43.7	56.3	100.0

The above table shows that, of the total number of establishments, 95 or 43.7 per cent were not connected in any way with living rooms while 122 or 56.3 per cent were. Of those connected, trousers stand first with 66, followed by vests with 29, coats with 20, overalls with 3, and jumpers and shirts with two each.

By comparison with the following table it appears, however, that many of those connected had a direct entrance from the outside so that such rooms could be easily separated from the living rooms.

TABLE XIV.

Rooms entered directly through separate doors or stairways.

Industries.	Through other rooms.	Directly.	To'al.
Trousers	18	68	86
Coats	8	54	62
Vests	12	33	45
Overcoats		15	15
Overalls		3	3
Jumpers		2	2
Shirts		4	4
Total	38	179	217
Per cent.	17.5	82.5	100.0

Of the 217 establishments, 179 or 82.5 per cent had direct outside entrances, and 38 or 17.5 were entered through other rooms. This fact throws considerable light upon the situation of work rooms. While many are connected with living rooms, making access to them convenient, it would be possible to separate by far the greater number, and not have to pass through living rooms to reach work rooms.

The following table deals with the sanitary condition of each tailoring establishment as a whole.

TABLE XV.

Sanitary condition of tailoring establishments.

Industries.	Good.	Fair	Bad.	Total.
Trousers	76	9	1	86
Coats	52	8	2	62
Vests	37	6	2	45
Overcoats	14		1	15
Overalls	1	2		3
Jumpers	1	1		2
Shirts	3	1		4
Total	184	27	6	217
Per cent.	84.8	12.4	2.8	100.0

Of the 217 establishments considered, 184 or 84.8 per cent were found in good condition, 27 or 12.4 per cent were in fair condition, and 6 or 2.8 were in bad condition. Many of those considered fair were kept in a clean and sanitary condition, showing the disposition of the proprietor to keep a satisfactory workshop, but were located in buildings needing repair. Others again were in first class buildings but showed need of more frequent sweeping; while still others were in excellent condition except for some temporary circumstance such as a frozen and bursted water-pipe or a smoking stove. In such cases repairs were ordered at once. Those cases considered bad were such as were located in unsatisfactory buildings, or where the proprietor showed indifference to the laws of sanitation. In such cases licenses were refused or revoked until the shop was moved or the necessary changes made. Then a second inspection was made and a license issued. Fortunately for the tailoring industry in Milwaukee only a small per cent of such cases existed.

Unsanitary closets are often a menace to the health of a community. For this reason the number, location and condition of all closets belonging to tailoring establishments were ascertained and set forth in the following table.

TABLE XVI.

Number and location of closets.

Industries.	Basement.	1st floor.	2d floor.	Outside.	Total.
Trousers	10	14	5	68	97
Coats	30	12	2	46	90
Vests	11	9	1	29	50
Overcoats	12	4	3	10	29
Overalls	....	1	....	2	3
Jumpers	....	....	....	2	2
Shirts	3	....	....	3	6
Total	66	40	11	160	277
Per cent.	23.9	14.4	3.9	57.8	100.0

Table XVI gives the number and location of all such closets. Of the total number, 277, the largest proportion are earth closets located outside, at least twenty feet from the building. Of those located inside, 66 or 23.9 per cent are on first floors, and 11 or 3.9 per cent are on second floors.

In the case of unsanitary closets the proprietor of the establishment was ordered to clean, whitewash or disinfect them at once and to make such other changes as were considered necessary by the inspector to place them in a sanitary condition.

WAGES IN THE TAILORING INDUSTRIES.

This section deals with wages in the contractor's shops, wages of the home workers who deal directly with the wholesale houses, and wages of home workers who finish garments for contractors. In the case of wages in shops the data was obtained directly from the time books of the employers at the time the inspection was made and verified by conversation with the workers. The wages of home workers were obtained from the worker at the time of inspection. Complete and accurate data was hard to obtain from the home workers who in many cases keep no complete account of the work done in a year, a month, or even a week. Receiving their pay for the pieces finished and returned, they seem to have no further interest in keeping a record. Such a record, if kept, would be of interest in an industry where work is so irregular.

Table I deals with wages paid in thirty of the regular contractor's shops employing 543 persons. These shops were not in any one locality, but were located in the different quarters of the city. They included all the different branches of the garment making industry. The list includes shops using gas, electric and foot power to run the machines and brushes.

The number of employes in each shop ranges from four to fifty-one. The figures presented give the earnings by the week of the six working days. This unit was selected because it most nearly corresponds to that used for the same purpose in other occupations. Workers were paid in various ways. Some worked by the day, some by the week, and still others by the piece. In some shops week wage was the rule, while others paid all employes by the piece. Still other shops paid piece and week wages at the same time. All wages, however paid, are reduced to the week unit in the following table.

TABLE I.

Weekly wages in shops.

Weekly earnings.	Male.	Female.	Total.
$20.00 per week	2		2
18.00 per week	2		2
15.00 per week	4		4
14.50 per week	1		1
14.00 per week	5		5
13.50 per week	3		3
13.00 per week	6		6
12.75 per week	1		1
12.50 per week	2		2
12.00 per week	29		29
11.00 per week	10		10
10.75 per week	1		1
10.50 per week	1		1
10.00 per week	25		25
9.00 per week	7	1	8
8.50 per week	2	7	9
8.00 per week	6	6	12
7.75 per week		3	3
7.50 per week		10	10
7.00 per week	3	22	25
6.75 per week		9	9
6.50 per week		18	18
6.25 per week		3	3
6.00 per week	6	37	43
5.75 per week		9	9
5.50 per week	3	30	33
5.25 per week		9	9
5.00 per week	1	55	56
4.75 per week		13	13
4.50 per week		51	51
4.25 per week	1	6	7
4.00 per week	1	43	44
3.75 per week		5	5
3.50 per week	3	31	34
3.25 per week		10	10
3.00 per week		24	24
2.75 per week		2	2
2.50 per week		9	9
2.25 per week		2	2
2.00 per week		2	2
1.75 per week		1	1
Total	125	418	543

Of the total number considered, 125 were males and 418 females. Wages for males ran from $20.00, the price paid to foremen, down to $3.50 a week, the price paid to apprentice boys. Wages of apprentice boys ran from this low figure up to $6.00. From $6.00 to $20.00 inclusive was the wage paid to regular workmen. The majority of the cases in which men's wages fell below $10.00 was where wages were paid by the piece. The highest classes of wages were paid to foremen, who, while directing and being responsible for all of the work did a part of the regular work themselves. Those classes receiving $12.00, $11.00 and $10.00 a week include the greatest number of males, Wages of females ran from $9.00 down to $1.75, the wage paid to girls who pull bastings or go on errands. Among the women the classes most prominent are those receiving $7.00, $6.00, $5.50, $5.00, $4.50, $4.00, $3.50 and $3.00.

The table also shows the market difference between men's and women's wages in the same industry.

TABLE II.

Classified weekly earnings of employes in tailor shops.

CLASSIFIED WEEKLY EARNINGS.	NUMBER OF PERSONS.			PER CENT OF PERSONS.		
	Males.	Females.	Total.	Males.	Females.	Total.
$15.00 and over	8		8	1.5		1.5
10.00 and over	84		84	15.5		15.6
7.00 and over	18	49	67	3.3	9.1	12.4
5.00 and over	10	170	180	1.8	31.3	33.1
3.00 and over	5	183	188	.9	33.7	34.6
Under $3.00		16	16		2.9	2.9
Total	125	418	543	23.0	77.0	100.0

Table II deals with classified weekly earnings in tailor shops. Of the total number considered, 543, those receiving $15.00 and over were males 8 or 1.5 per cent; those receiving $10.00 and over were males 84 or 15.5 per cent; those receiving $7.00 and over were males 18 or 3.3 per cent and females 49 or 9.1 per cent; those receiving $5.00 and over were males 10 or 1.8 per cent and females 170 or 31.3 per cent; those receiving $3.00 and over were males 5 or .9 per cent and females 183 or 33.7 per cent; those receiving under $3.00 were females 16 or 2.9 per cent.

The two following tables deal with wages of the home worker.

TABLE III.

Earnings by hour of home workers in the tailoring industry.

Earnings by hour.	Making complete garments.	Finishing garments.	Total.	Per cent.
15c per hour	1	1	2	1.6
13c per hour	1		1	.8
12½c per hour	1		1	.8
11c per hour	1		1	.8
10c per hour	15	23	38	30.8
9½c per hour	7		7	5.7
9c per hour	6	18	24	19.6
8½c per hour	10	3	13	10.6
8c per hour	12	11	23	18.7
7½c per hour	4	4	8	6.5
7c per hour		5	5	4.1
Total	58	65	123	100.0

Table III deals with earnings by the hour of home workers in the tailoring industry. Since the work is all paid by the piece and the amount done by each one in a day is so irregular, it was found that most accurate results could be obtained by finding the earning of each one by the hour, and from that computing the weekly wage, as is done in Table IV.

Of 123, the total number of home workers considered, 58 made complete garments and worked directly for the wholesale houses and 65 finished garments for contractors. The wage per hour ran from 15 cents, the highest reported, to 7 cents, the lowest. The classes most prominent among those making complete garments were 10 cents, 8½ cents and 8 cents an hour; those most prominent among the finishers were 10 cents, 9 cents and 8 cents an hour. Of the total number, those receiving 10 cents were 38 or 30.8 per cent; 9 cents, 24 or 19.6 per cent; 8½ cents, 13 or 10.6 per cent; and 8 cents, 23 or 18.7 per cent.

TABLE IV.

Possible weekly earnings at given rate per hour for home workers in tailoring industry.

Weekly earnings.	Making complete garments.	Finishing garments.	Total.	Per cent.
$9.00 per week	1	1	2	1.6
7.80 per week	1	....	1	.8
7.50 per week	1	....	1	.8
6.60 per week	1	....	1	.8
6.00 per week	15	23	38	30.8
5.70 per week	7	....	7	5.7
5.40 per week	6	18	24	19.6
5.10 per week	10	3	13	10.6
4.80 per week	12	11	23	18.7
4.50 per week	4	4	8	6.5
4.20 per week	....	5	5	4.1
Total	58	65	123	100.0

Taking as a basis the ten hour day, which is the rate for 73.5 per cent of the total number of employes as shown in Table VII, preceding section, Table IV gives the weekly earnings at the given rate per hour for the home workers. This shows 30.8 per cent receiving $6.00 a week, 19.6 per cent receiving $5.40 a week, 10.6 per cent receiving $5.10 a week, and 18.7 per cent receiving $4.80 a week, with none receiving above $9.00 or below $4.20 a week.

Since the home workers were almost entirely women, the few men found were not included in Table IV so that a correct basis could be had for a comparison of wages of women in shops, women working directly for wholesale houses and women finishing garments for contractors. Reference to Table I shows the largest number in any one class to be those receiving $5.00 a week, but considering the total number, the average wage in shops is $5.09 for women workers or $4.98 for females including apprentice and errand girls. Among women dealing with the wholesale houses the largest class was those receiving $6.00 a week, but the average wage falls to $5.51. Among women finishing goods for contractors the largest class was also those receiving $6.00 a week but the average wage falls to $5.40.

In the case of the home workers there seems to be little advantage in dealing directly with the wholesale houses and saving the profits of the middleman. A difference of 11 cents a week can be more than accounted for by the extra skill required in those making an entire garment.

Comparing the wages of the women in shops with the home workers, those of the latter seem slightly higher, but the difference is certainly not great enough to cover the expense saved to the contractor in room rent and machines. Contractors admitted that at the price paid for finishing, it was cheaper to have such work done out of the shop although the saving was slight.

KNITTING INDUSTRY.

TABLE I.

Establishments in knitting industry.

Industries.	Establishments.	Per cent.
Hoods	23	13.0
Shawls	22	12.4
Jackets	12	6.8
Bootees	3	1.7
Mittens	76	43.1
Sweaters	15	8.4
Socks	6	3.4
All kinds of crocheting	20	11.2
Total	177	100.0

Table I deals with the number and per cent of establishments and kinds of garments made or finished which are classified as follows: Hoods, shawls, jackets, bootees, mittens, sweaters, socks. Since those establishments making all kinds of crocheted garments formed a considerable number they are given a separate class.

Each place regardless of the number employed is regarded as an establishment. The total number of places included is 177. Of these 23 or 13 per cent turned out hoods; 22 or 12.4 per cent, shawls; 12 or 6.8 per cent, baby jackets; 3 or 1.7 per cent, bootees; 76 or 43.1 per cent finished mittens; 15 or 8.4 per cent finished sweaters; 6 or 3.4 per cent finished socks; and 20 or 11.2 per cent made all kinds of crocheted garments before mentioned.

TABLE II.

Number of workers in knitting establishments.

Industries.	1 person.	2 people.	3 people.	4 people.	5 people	Total.
Hoods	20	2	1			23
Shawls	18	3	1			22
Jackets	10	2				12
Bootees	3					3
Mittens	48	16	7	2	3	76
Sweaters	12	2	1			15
Socks	2		2	1	1	6
All kinds crocheting	17	3				20
Total	130	28	12	3	4	177
Per cent.	73.5	15.8	6.8	1.7	2.2	100.0

Table II shows the number of workers in each establishment. Of the total number, 177, it appears that 130 or 73.5 per cent had one each; 28 or 15.8 per cent had two each; 12 or 6.8 per cent had three each; 3 or 1.7 per cent had four each; and 4 or 2.2 per cent had five each. While such figures indicate the home work shop in general, they also prove that there is little or no overcrowding.

TABLE III.

Male and female workers in each class.

Industries.	Male.	Female.	Total.
Hoods		27	27
Shawls		27	27
Jackets		14	14
Bootees		3	3
Mittens	18	106	124
Sweaters		19	19
Socks	3	14	17
All kinds crocheting		23	23
Total	21	233	254
Per cent.	8.3	91.7	100.0

Table III shows the number of workers in each branch of the industry. The number of males is small and was made up of old men and boys. Of 254, the total number of employes, those working on hoods included 27 females; on shawls, 27 females; on jackets, 14 females; on bootees, 3 females; on mittens, 18 males and 106 females; on sweaters, 19 females; on socks, 3 males and 14 females; and those making all kinds of crocheted garments included 23 females.

TABLE IV.

Number of young persons and children in home knitting industry.

Industries.	16-18 years.	14 16 years	Under 14 years.	No. permits.
Hoods		1		1
Shawls	1			
Jackets				
Bootees				
Mittens	4	4	13	4
Sweaters				
Socks	1		3	
All kinds crocheting				
Total	6	5	16	5

The above table shows the number of young persons and children found at work in the knitting industry. Those between 16 and 18 years numbered six; between 14 and 16 years, five; under 14 years, sixteen. The greater number of those at work under 14 years were employed at such work after school hours or on Saturdays. Those between 7 and 14 years who were found at work during school hours were reported to the truant officer who forced them into school.

TABLE V.

Classification of hours of labor daily and number of establishments in each class.

Industries.	Irregular 1-6 hours.	Irregular 7-9 hours.	10 hours.	Total.
Hoods	13	8	2	23
Shawls	9	11	2	22
Jackets	4	8	....	12
Bootees	....	2	1	3
Mittens	39	34	3	76
Sweaters	5	8	2	15
Socks	3	3	....	6
All kinds crocheting	13	7	....	20
Total	86	81	10	177
Per cent.	48.5	45.8	5.7	100.0

As is usually the case in the home work shop, the hours of labor in the knitting industry are very irregular. Of the 177 establishments considered, only 10 or 5.7 per cent were working regularly ten hours a day. Of the remaining number, 86 or 48.5 per cent worked irregularly from one to six hours inclusive daily, and 81 or 45.8 per cent worked irregularly from seven to nine hours inclusive daily. The number working regularly ten hours daily were divided evenly between the crocheters and finishers, 2 making hoods, 2 making shawls, 1 making bootees, 3 finishing mittens, and 2 finishing sweaters.

TABLE VI.

Classification of hours of labor daily and number of employes in each class.

Industries.	Irregular 1-6 hours.	Irregular 7-9 hours.	10 hours.	Total.
Hoods	15	10	2	27
Shawls	11	14	2	27
Jackets	6	8	......	14
Bootees	......	2	1	3
Mittens	66	54	4	124
Sweaters	5	10	4	19
Socks	11	6	......	17
All kinds crocheting	15	8	......	23
Total	129	112	13	254
Per cent.	50.8	44.1	5.1	100.0

Of the 254 employes in the knitting industry only 13 or 5.1 per cent were employed regularly ten hours a day, 112 or 44.1 per cent were employed irregularly from 7 to 9 hours inclusive daily, and 129 or 50.8 per cent were employed irregularly from 1 to 6 hours inclusive daily. Thus it appears that over half of the total number work less than seven hours daily, and 94.9 per cent work irregularly.

TABLE VII.

Kind of building occupied in knitting industry.

INDUSTRIES.	FRAME, STORIES HIGH.					BRICK, STORIES HIGH.			Total.
	1.	1½.	2.	2½.	3.	1.	2.	3.	
Hoods	5	5	11	......	......	......	2	......	23
Shawls	7	4	9	1	......	......	......	1	22
Jackets	3	1	7	......	......	......	......	1	12
Bootees	......	......	3	......	......	......	......	......	3
Mittens	13	13	47	2	......	......	......	1	76
Sweaters	5	3	6	......	1	......	......	......	15
Socks	3	1	2	......	......	......	......	......	6
All kinds crocheting	1	1	16	1	1	......	......	......	20
Total	37	28	101	4	2	......	2	3	177

Table VII deals with kinds of buildings occupied by workrooms in the knitting industry. Of the 177 buildings, 172 were of wood and 5 of brick. Of the wooden or frame buildings 37 were one story high; 28 were one and one-half stories; 101 were two stories; 4 were two and one-half stories; and 2 were three stories. Of the brick buildings, 2 were two stories and 3 were three stories. This shows the majority of the buildings to be two story frame structures.

TABLE VIII.

Use of buildings in knitting industry.

Industries.	Tenement.	Dwelling	Shop.	Dwelling and shops.	Total.
Hoods	1	20	....	2	23
Shawls	1	19	1	1	22
Jackets	1	11	....	....	12
Bootees	....	3	....	....	3
Mittens	1	72	....	3	76
Sweaters	....	14	....	1	15
Socks	....	6	....	....	6
All kinds crocheting	4	15	....	1	20
Total	8	160	1	8	177
Per cent.	4.5	90.4	.6	4.5	100

Table VIII shows the purpose for which the establishments in question were used. Of the total number, 8 or 4.5 per cent were tenements; 160 or 90.4 per cent were dwellings; 1 or .6 per cent was a shop; and 8 or 4.5 per cent dwelling and shop combined.

Even in this industry where the home shop prevails the tenement is still a small factor. Although the habits of those dwelling in a cottage may be no cleaner or better than those dwelling in a tenement they are free from the unsanitary conditions too often prevailing where many people are crowded into one building which in itself is old or unsanitary.

TABLE IX.

Showing stories occupied by work room.

Industry.	Basement.	1st floor.	2d floor.	3d floor.	Total.
Hoods	....	16	7	....	23
Shawls	4	13	5	....	22
Jackets	1	11	....	....	12
Bootees	....	1	2	....	3
Mittens	16	51	9	....	76
Sweaters	1	12	1	1	15
Socks	....	4	2	....	6
All kinds crocheting	1	14	4	1	20
Total	23	122	30	2	177
Per cent.	13	68.9	17	1.1	100

The above table shows what part of the building was occupied by the work rooms. In the knitting industry, as well as in the tailoring industry, whenever the floor of the lower story was at all below the level of the ground it was classed as basement. Of the 177 establishments 23 used basement rooms, 122 used first floor, 30 used second floor, and 2 used third floor rooms. Of those working in basements the finishers of mittens comprised more than two thirds.

TABLE X.

Kinds of rooms used for work rooms in knitting industry.

Industries.	Work room only.	Living room.	Bed room.	Kitchen.	Total.
Hoods		15		8	23
Shawls		17		5	22
Jackets		8		4	12
Bootees		2		1	3
Mittens	3	42	4	27	76
Sweaters	1	9	1	4	15
Socks		4	1	1	6
All kinds crocheting		14		6	20
Total	4	111	6	56	177
Per cent.	2.3	62.7	3.4	31.6	100

From this table it appears that of 177, the total number considered, 4 or 2.3 per cent were used as work rooms only; 111 or 62.7 per cent were used as sitting rooms; 6 or 3.4 per cent were used as bed rooms; and 56 or 31.6 per cent were used as kitchens. Two thirds of those using bed rooms, and nearly half of those using kitchens were finishers of mittens. This class, however, had the advantage of including three out of the four establishments used as work rooms only.

Tables XI and XII show the relation of work rooms to the other rooms in the buildings in which knitting is carried on.

TABLE XI.

Showing rooms connected and not connected with living rooms in knitting industry.

Industries.	Not connected.	Connected.	Total.
Hoods		23	23
Shawls		22	22
Jackets		12	12
Bootees		3	3
Mittens		76	76
Sweaters		15	15
Socks		6	6
All kinds crocheting		20	20
Total		177	177
Per cent.		100	100

TABLE XII.

Rooms entered directly through separate doors or stairways.

Industries.	Through other rooms.	Directly	Total.
Hoods	2	21	23
Shawls	1	21	22
Jackets	2	10	12
Bootees	....	3	3
Mittens	16	60	76
Sweaters	5	10	15
Socks	3	3	6
All kinds crocheting	4	16	20
Total	33	144	177
Per cent.	18.6	81.4	100

Table XI shows all rooms used as work rooms connected with living rooms. This is a significant fact concerning the knitting industry. Table XII shows that out of 177 establishments, 33 or 18.6 per cent were entered through other rooms, while 144 or 81.4 per cent were entered directly from outside. While nearly all of these rooms entered directly were sitting rooms or kitchens, they were usually larger and had the advantage of more light and air than those work rooms entered through other rooms.

TABLE XIII.

Sanitary condition of knitting establishments.

Industries.	Good.	Fair.	Bad.	Total.
Hoods	18	5	....	23
Shawls	20	1	1	22
Jackets	9	3	....	12
Bootees	2	1	....	3
Mittens	39	21	16	76
Sweaters	12	3	....	15
Socks	2	2	2	6
All kinds crocheting	17	3	....	20
Total	119	39	19	177
Per cent.	67.2	22.1	10.7	100

Table XIII represents the sanitary condition of the knitting establishments at the time of inspection. Of the total number, 119 were in good condition, 39 fair and 19 bad. In a large majority of those considered good the strictest neatness and cleanness prevailed, and in all, the laws of cleanness and sanitation were observed. Those classed as fair showed evidence of regular sweeping and scrubbing, but children's garments scattered on the floor, doors leading into kitchens or bed rooms standing ajar, or other unsatisfactory conditions as easily remedied, prevented the establishments from being classed as good. Those places classed as bad presented unsanitary conditions about the work rooms or adjacent living rooms. Several instances there were of filth and squalor due to poverty and misfortune, but the majority were simply the result of the natural tastes and habits of the people. The entire nineteen need constant watching to keep them in order, without which they present little hope of permanent reform.

TABLE XIV.

Number and location of closets.

Industries.	Basement	1st floor.	2d floor.	3d floor.	Outside	Total.
Hoods	....	7	....	....	16	23
Shawls	2	4	2	....	14	22
Jackets	....	2	....	....	10	12
Bootees	....	1	1	....	1	3
Mittens	3	3	2	....	68	76
Sweaters	1	2	....	1	11	15
Socks	....	....	1	....	5	6
All kinds crocheting	1	4	1	1	13	20
Total	7	23	7	2	138	177
Per cent.	4	13	4	1.1	77.9	100

Table XIV gives the number and location of closets belonging to knitting establishments. Of 177, the total number, 7 or 4 per cent were in the basement; 23 or 13 per cent were on first floor; 7 or 4 per cent on second floor; 2 or 1.1 per cent on third floor; and 138 or 77.9 per cent were located outside, at least twenty feet from the building.

All closets found unsanitary were located outside of the building. These were ordered immediately cleaned and disinfected and put in a proper sanitary condition.

WAGES IN THE KNITTING INDUSTRY.

Earnings by hour of home workers in the knitting industry.

Earnings by hour.	Crocheters	Finishers.	Total	Per cent.
10c per hour	7	5	12	4.7
9c per hour	1	1	2	.8
8c per hour	8	7	15	5.9
7c per hour	22	42	64	25.2
6c per hour	30	34	64	25.2
5c per hour	19	61	80	31.5
4c per hour	5	5	10	3.9
3c per hour	2	5	7	2.8
Total	94	160	254	100.0

Table I deals with earnings by the hour of home workers in the knitting industry. As shown in Table VI, 94.9 per cent of the total number work irregular hours. Therefore, as in the case of home workers in the tailoring industry, the only common basis for classification is the hourly earnings.

Of 254, the total number from whom such statistics were gathered, 94 were crocheters and 160, finishers of knit goods. The earnings per hour ran from 10 cents, the highest, down to 3 cents, the lowest. The class most prominent is that receiving 5 cents an hour, including 80 or 31.5 per cent of the total number of workers. Next in order of prominence are those receiving 7 cents and 6 cents, including 64 workers each, or 50.4 per cent of the total number. Those receiving 10 cents an hour comprised 4.7 per cent of the total number; 9 cents, 8 per cent of the total; 8 cents, 5.9 per cent of the total; 4 cents, 3.9 per cent of the total; and 3 cents, 2.8 per cent of the total. This brings the average earning per hour down to a little more than 6 cents. However unskilled the work of finishing knit goods may be, six cents an hour is a deplorably low wage for that class, and is even worse for those doing crocheting, which is really skilled work.

TABLE II.

Possible weekly earnings at given rate per hour for home workers in the knitting industry.

Weekly earnings.	Crocheters.	Finishers.	Total.	Per. cent.
$6 00 per week	7	5	12	4.7
5 40 per week	1	1	2	.8
4 80 per week	8	7	15	5.9
4 20 per week	22	42	64	25.2
3 60 per week	30	34	64	25.2
3 00 per week	19	61	80	31.5
2 40 per week	5	5	10	3.9
1 80 per week	2	5	7	2.8
	94	160	254	100.0

Table II shows the possible weekly earning at given rate per hour for home workers in the knitting industry. Only 4.7 per cent of the total number could possibly earn $6.00 a week with a ten hour day; 25.2 per cent, $4.20; 25.2 per cent, $3.60; and 31.5 per cent, $3.00. The average earning per week would be $3.60. But Table VI shows that 50.8 per cent of the total number work irregularly from 1 to 6 hours daily, and 44.1 per cent from 7 to 9 hours daily. Comparison of Tables VI and II gives a fair estimate of the earnings of this class.

COMPARISON OF TAILORING AND KNITTING INDUSTRIES.

The following tables present the totals found in the tailoring and knitting industries which are thus brought together for purposes of comparison.

The first table deals with the number of establishments in each class.

Industries	Establishments.	Per cent.
Tailoring	217	55.1
Knitting	177	44.9
Total	394	100.0

Of the total number considered in this report, tailoring included 55.1 per cent and knitting 44.9 per cent of the establishments.

Comparing the total number of employes in each industry gives the following result:

Industries	Male	Female.	Total.	Per cent.
Tailoring	350	1,068	1,418	84.6
Knitting	21	233	254	15.4
Total	371	1,301	1,672	100.0

Of 1,672, the total number, those in the tailoring industry comprise 84.6 per cent; in the knitting, 15.4 per cent. The total number of males in both industries is 371; of females is 1,301.

Comparison of the relative number employed in each establishment shows a marked difference between the two industries.

Industries	1 person.	2–5 inclusive.	6–10 inclusive.	Over 10.	Total
Tailoring	101	49	14	53	217
Knitting	130	47	....	....	177
Total	231	96	14	53	394

While the knitting industry has the larger number of establishments employing one person, and the two industries have almost an equal number employing from 2 to 5 inclusive, the tailoring industry is the only one showing any establishments employing more than five.

Industries.	16—18 yrs.	14—16 yrs.	Under 14 yrs	No permits.
Tailoring	197	103	....	57
Knitting	6	5	16	5
Total	203	108	16	62

Of young persons between sixteen and eighteen years, the tailoring industry employed by far the greater number. This was largely due to the existence of regular shops, where all such workers were employed. The same was true regarding those between fourteen and sixteen years. No children under fourteen years were found working in tailoring establishments. This was probably due to two reasons, one being that the work in general and the class of goods made in Milwaukee did not profit by the labor of young children, and the other being the enforcement of the child labor law at the previous inspection by officers of the State Labor Bureau.

Industries.	8 hours.	9 hours.	10 hours.	Irregular but less than 10.	Total.
Tailoring	4	7	85	121	217
Knitting	....	....	10	288	394
Total	4	7	95	288	394

A classification of the hours of labor daily shows all those establishments working regularly eight, nine and ten hours daily, and also the number working irregular hours. Those working irregularly represent home workers entirely as do also the ten in the knitting industry who work ten hours daily.

Industries.	8 hours.	9 hours.	10 hours	Irregular but less than 10.	Total.
Tailoring	46	71	1,039	262	1,418
Knitting	....	....	13	241	254
Total	46	71	1,052	503	1,672

The preceeding table shows that of 1,672, the total number employed in both industries, 46 worked 8 hours daily, 71 worked 9 hours, and 1,052 worked 10 hours, while 503 worked irregularly less than 10 hours daily. Thus it appears that the 288 or 73.1 per cent of the total number of establishments, working irregularly, employed only 503 or 30 per cent of the total number of workers.

INDUSTRIES.	FRAME, STORIES HIGH.					BRICK, STORIES HIGH.			Total
	1	1½	2	2½	3	1	2	3	
Tailoring	62	27	109	10	3	......	5	1	217
Knitting	37	28	101	4	2	......	2	3	177
Totals	99	55	210	14	5	......	7	4	394

Comparing the kinds of buildings used by the two industries the same general tendency is apparent throughout, with one exception. In the case of one story frame structures, the tailoring industry occupies the larger number in proportion to its total number of establishments. This is probably due to the fact that many of the tailor shops are in one story frame buildings designed expressly for that purpose. The majority of establishments in both industries occupied 2 story frame structures.

Industries.	Tenement.	Dwelling.	Shop.	Dwelling and shop.	Total.
Tailoring	2	139	60	16	217
Knitting	8	160	1	8	177
Total	10	299	61	24	394

The above table shows the use of buildings in the two industries. While the knitting industry occupies the larger number of tenements, the total number in both cases is only 2.5 per cent. The most striking feature of this table is the large number of establishments in both industries, located in dwelling houses. However rigidly inspected, these constitute a serious evil in the sweating problem.

Industries.	Basement.	1st floor.	2d. floor	3d floor.
Tailoring	26	175	27	....
Knitting	23	122	30	2
Total	49	297	57	2

Of the 394 establishments, 49 used basement rooms, 297 first floor, 57 second floor, and 2 third floor. Several of the tailoring establishments used two floors, separating the pressing and sewing rooms. This was an advantage to those in the sewing room as it removed steam, extra heat, and the odor of pressing garments.

Industries.	Work room only	Living room.	Bed room.	Kitchen.	Total.
Tailoring	99	75	1	42	217
Knitting	4	111	6	56	177
Total	103	186	7	98	394

Of the establishments occupying work rooms only, the tailoring industry shows much the larger number which is 45.5 per cent of its total, while that of the knitting industry is 2.3 per cent of its total. In the case of those occupying living rooms the tailoring industry presents the better condition, 34.6 per cent of its establishments being in this class, against 62.7 per cent of the knitting industry. Few bed rooms were used by either industry. Of those using kitchens, 42 were in the tailoring industry and 56 in the knitting. All places containing cook stoves were classed as kitchens, although in many cases the cooking was done in the basement or in a temporary addition.

Industries.	Not connected.	Connected.	Total.
Tailoring	95	122	217
Knitting	....	177	177
Total	95	299	394

The above table, when read with the two which precede it, throws much light on the location of the various establishments. This represents 24.1 per cent of the places not connected with living rooms, and 75.9 per cent connected. The latter represents the majority of the tailoring and all of the knitting establishments. Fortunately this does not represent the amount of work done in such places, for a large majority of the total number of workers are found in the separate tailor shops.

Industries.	Through other rooms.	Directly.	Total.
Tailoring	38	179	217
Knitting	33	144	177
Total	71	323	394

A comparison of the two industries with regard to the number of establishments entered directly or indirectly shows no marked difference. Among the tailoring establishments 17.5 per cent are entered through other rooms, and 82.5 per cent directly: among the knitting, 18.6 per cent are entered indirectly and 81.4 per cent have direct outside entrance.

The following table represents the sanitary condition of the establishments in the two industries.

Industries.	Good.	Fair.	Bad.	Total
Tailoring	184	27	6	217
Knitting	119	39	19	177
Total	303	66	25	394

Here it appears that the tailoring industry had the larger proportion classed as good and the smaller proportion classed as fair or bad, and stand 184 or 84.8 per cent good; 27 or 12.4 per cent fair; and 6 or 2.8 per cent bad; while the knitting industry included 119 or 67.2 per cent good; 39 or 22.1 per cent fair; and 19 or 10.7 per cent bad.

The following table shows the number and location of closets in the two industries.

Industries.	Basement.	1st floor.	2d floor.	3d floor.	Outside.	Total.
Tailoring	66	40	11	....	160	277
Knitting	7	23	7	2	138	177
Total	73	63	18	2	298	454

Of the total number of closets, 65.6 per cent were located outside and entirely separate from the work rooms; 16.1 per cent in basements; 13.9 per cent on first floor; 4 per cent on second; and .4 per cent on third.

The table following represents the sanitary condition of such closets.

Industries.	Sanitary.	Unsanitary.	Total.
Tailoring	244	33	277
Knitting	142	35	177
Total	386	68	454

Comparison of the sanitary condition of closets shows that somewhat better conditions prevailed in the tailoring industry, while the total number shows 85 per cent sanitary and 15 per cent unsanitary.

ORDERS ISSUED.

Orders.	Tailors.	Knitters.	Total.
Permits for children	57	5	62
Registers of children	23		23
Registers of finishers	12		12
Ventiltion	12	7	19
Light	3		3
Sanitation	107	108	215
On building	8		8
Total	222	120	342
Per cent.	65	35	100

At the inspection of the 394 establishments in question, 342 more or less serious violations of the laws were discovered. Classified according to industries they stand as follows: Tailoring 22 or 65 per cent; knitting 120 or 35 per cent. Classified according to the nature of the violation they stand as follows: Permits for children 62; registers of children 23; registers of finishers 12; ventilation 19; lights 3; sanitation 215; on building 8.

The proprietors of the establishments affected were ordered to comply with the law and at once remedy the violation.

MANUFACTURING RETURNS--1903.

In past years this department has sought to indicate the trend in certain industrial conditions through comparison of the manufacturing returns from year to year. As is has never been possible to obtain complete returns from enough manufacturers to constitute a census of manufacturing, the value of these comparisons depended largely upon a practice of pairing the schedules of successive years. By this method of compilation, the schedules of each establishment for two successive years were paired and the returns for all establishments reporting were classified by industries. When the data taken from these schedules for the two successive years were compiled by industries the changes, growth, etc., from year to year were correctly presented, at least insofar as concerned the portion of each industry represented. Moreover, since the comparisons in each case were based upon returns for *identical establishments,* and since the establishments included were a large proportion, in most cases a majority, of the several industries, it was reasonably safe to assume that whatever tendencies were exhibited by these comparisons were approximately correct and representative for the industry as a whole.

Owing to the destruction by fire in 1904 of all schedules previously received it was impossible this year to pair the schedules for the two past years. Consequently the data received would be of very little significance, except as relates to wages, hours of labor, etc., and are therefore not presented in this report. Only the facts as to wages, hours of labor, range of employment, etc., are presented. The schedules, however, were carefully compiled and preserved and it is hoped that in the next report it will be possible to present complete comparative statements covering all important phases of the condition and trend of manufacturing.

In the capitol fire many returns for the last year were also destroyed and it was necessary to request many manufacturers to fill out a second schedule. It is due these concerns to state that the request for extra schedules was in most cases very kindly and promptly complied with.

In formulating the new schedule certain changes regarding wage statistics were made with a view primarily to making the schedule more easy to fill out. Instead of asking the employer to classify the wage-earners, the definite daily wage was asked for in each case. This information could readily be supplied by merely copying a pay roll. The classification could be done in this office. While it entailed much more work in compiling the returns the new form of inquiry had the added merit of enabling the department to compute the exact average wage in each class, occupation, or industry. This advantage is believed to be so great as to warrant the retention of the new form of inquiry in the future. It is also hoped that the greater facility with which the schedule may be filled out will lead to more complete returns from manufacturers.

It so happened that at the time of the change in the form of schedule a large number of the old forms were in the hands of manufacturers. As a result a majority reported this year on the old form. So that the following tables are composed of two parts. The first part (Table A) is taken from the reports on the new forms, and the second part (Table B) is a combination of the returns from all schedules returned.

The facts for each industry, herewith presented, are divided into two parts, "Table A" and "Table B."

"Table A" shows for that portion of the industry which reported wage statistics in detail, 1st., the several kinds of services or occupations employed in the industry; 2nd., the average number of hours work per day for each occupation; 3rd., the number and proportion of persons in each occupation; 4th, the total amount of wages per day paid to all persons in each occupation and the per cent of wages in each occupation to the total wages in all occupations; 5th, the average wage per day and per hour in each occupation. "Table A" is divided into two parts. The first part presents the statistics affecting wage earners only. The second part presents such returns as were received affecting salaried persons such as bookkeepers, clerks, foremen, etc. The two parts of the table are computed separately so that the average hours, wage, etc., for all occupations in a given industry are shown separately for the strictly wage occupations and salaried occupations.

"Table B" shows, for all establishments reporting, 1st, the classified weekly earnings; 2nd, the average wage per day; 3rd, the range of employment by months. Under classified weekly earnings are shown the number of all persons, male, female, and both male and female, employed in each of ten classes of employes, classified on the basis of weekly earnings, together with the per cent which the total number in each class is of the total number in all classes. Under the average wages per day is shown the average wage for males, females, and both males and females in each class and the average for all classes. This average in each class is based on the exact average wage received in each class by all employes for whom wages were reported in detail. This average when computed is also applied to all persons in each corresponding class reported by classified earnings only. The result should give very nearly the exact average daily wage for all persons receiving wages in each class for all establishments reporting either as to wages in detail or only on the classified basis. Having the number of persons in each class and the average wage in each class, the average wage for all persons in all classes is readily computed. Under the range of employment is shown the total number of persons reported as employed each month. The range of employment for each month through the year is expressed by the per cent which the number of persons employed each month is of the number for the month when the greatest number was employed, which for the purposes of this statement is considered as 100 per cent, or full employment.

In sending out schedules, there were certain establishments which were not questioned as to capital and certain other factors of their condition as the nature of their business was such that these factors were of relatively little significance. The returns from these establishments were separated from the leading manufacturing industries proper and classified into eight industries and miscellaneous establishments. The statistics of these industries are presented following the "51 leading industries" under the caption "Nine Lesser Industries."

AGRICULTURAL IMPLEMENTS—25 ESTABLISHMENTS.

Table A.—Showing by occupation, classes, hours of work per day, number and proportion of persons employed, total wages and proportion of wages paid and average wages per day and per hour in each occupation for that portion of the industry reporting employes in detail.

OCCUPATION.	Average hours per day.	PERSONS.		WAGES.			
		Total.	Per cent.	Total per day.	Per cent.	Average.	
						Per day.	Per hour.
Apprentices	10	16	1.57	$11.97	.680	$0.748	$0.074
Assemblers	10	25	2.45	43.17	2.456	1.726	.172
Blacksmiths	10	55	5.39	121.89	6.934	2.216	.221
Carpenters	10	8	.79	14.48	.823	1.810	.181
Core makers	10	13	1.28	17.50	.996	1.346	.134
Cupola tenders	10	2	.20	3.50	.199	1.750	.175
Engineers	10	3	.30	5.75	.326	1.916	.191
Fireman	10	1	.09	1.75	.099	1.750	.175
Grinders and polishers	10	24	2.36	38.49	2.195	1.603	.160
Iron melter	10	1	.09	2.25	.128	2.250	.225
Laborers	10	175	17.17	247.85	14.100	1.416	.141
Machinists	10	226	22.18	466.08	26.515	1.973	.197
Machine tenders	10	9	.89	10.60	.603	1.177	.117
Machine tenders, helpers	10	107	10.50	113.10	6.434	1.057	.105
Moulders	9.06	165	16.19	366.69	20.860	2.221	.245
Moulders, helpers	10	4	.40	6.00	.341	1.500	.150
Painters	10	35	3.44	52.25	2.972	1.493	.149
Pattern makers	10	6	.59	14.14	.804	2.356	.235
Pipe fitter	10	1	.09	1.85	.105	1.850	.185
Plowman	10	1	.09	1.75	.100	1.750	.175
Teamsters	10	5	.49	9.75	.555	1.950	.195
Tinners	10	1	.09	2.25	.128	2.250	.225
Truckers	10	25	2.45	30.50	1.736	1.220	.122
Watchmen	10.50	6	.59	10.00	.569	1.666	.166
Woodworkers	10	73	7.17	116.95	6.653	1.629	.162
Woodworkers, helpers	10	32	3.14	47.28	2.689	1.477	.147
Total and average	9.95	1,019	100.00	$1,757.79	100,000	$1.725	$0.173
Bookkeepers	10	1	2.63	$2.00	$1.967	$2.000	$0.200
Foremen	9.96	28	73.69	81.85	8.521	2.923	.292
Salesmen	10	1	2.63	3.00	2.952	3.000	.300
Shippers	10	8	21.05	14.80	14.560	1.850	.231
Total and average	9.97	38	100.00	$101.65	100.000	$2,675	$0.267

Table B—Showing number of persons, male and female, and total number and proportion in each class of employes, classified by weekly earnings received, together with the average wage per day received in each class and the total number of persons employed by months and the range of employment for *all* establishments reporting either as to wages and employes, in detail, or classified weekly earnings.

CLASSIFICATION OF WEEKLY EARNINGS.					AVERAGE WAGES PER DAY.			NO. PERSONS EMP BY MONTH.		
Classification.	No. of Persons.			Per cent.	Male.	Female.	Total	Month.	No.	Range.
	Male.	Female.	Total							
Under $5 00	124	14	138	$2.97	$.672	$.670	$.672	Jan	4,255	96.38
$ 5 00 but under 6 00	70	2	72	1.55	.85	.85	.85	Feb	4,384	99.24
6 00 but under 7 00	178	......	178	3.82	1.001	......	1.001	Mar	4,415	100.00
7 00 but under 8 00	388	......	388	8.34	1.249	......	1.249	April	4,148	93.95
8 00 but under 9 00	473	......	473	10.16	1.355	......	1.355	May	3,970	89.92
9 00 but under 10 00	952	......	952	20.46	1.515	......	1.515	June	3,877	87.81
10 00 but under 12 00	754	......	754	16.20	1.745	......	1.745	July	3,611	81.79
12 00 but under 15 00	731	......	731	15.71	2.115	......	2.115	Aug	3,301	74.77
15 00 but under 20 00	742	......	742	15.95	2.635	......	2.636	Sept	2,747	62.20
20 00 and over	225	......	225	4.84	3.52	....	3.52	Oct	2,580	58.48
								Nov	2,671	60.49
Total	4,637	16	4,653	100.00	$1.759	$.692	$1.759	Dec	2,801	63.42
								Ave	3,563	80.70

ARTISANS' TOOLS—6 ESTABLISHMENTS.

Table A—Showing by occupation, classes, hours of work per day, number and proportion of persons employed, total wages and proportion of wages paid and average wages per day and per hour in each occupation for that portion of the industry reporting employes in detail.

OCCUPATION.	Average hours per day.	PERSONS.		WAGES.			
		Number.	Per cent.	Total per day.	Per cent.	Average.	
						Per day.	Per hour.
Cutter	8	1	1.45	$1.66	1.282	$1.66	$0.207
Engineer	10	1	1.45	1.75	1.352	1.75	.175
File cutter	10	1	1.45	1.50	1.159	1.50	.150
Forger	10	1	1.45	3.25	2.510	3.25	.325
Grinders	8.66	9	13.04	22.30	17.225	2.477	.286
Helpers	10	3	4.35	5.25	4.055	1.750	.175
Machine hands	10	47	68.11	81.50	62.954	1.738	.173
Machinist	10	1	1.45	2.50	1.931	2.500	.250
Polishers	10	2	2.90	4.75	3.670	2.375	.237
Steelsmiths	9.50	2	2.90	2.50	1.931	1.250	.131
Temperer	10	1	1.45	2.50	1.931	2.500	.250
Total and average	9.78	69	100.00	$129.46	100.00	$1.876	$0.191
Salesmen	8	2	100.00	$4.16	100.00	$2.08	$0.260

Table B—Showing number of persons, male and female, and total number and proportion in each class of employes, classified by weekly earnings received, together with the average wage per day received in each class and the total number of persons employed by months and the range of employment for *all* establishments reporting either as to wages and employes, in detail or classified weekly earnings.

CLASSIFICATION OF WEEKLY EARNINGS.					AVERAGE WAGES PER DAY.			NO. PERSONS EMP. BY MONTH.		
Classification.	No. of Persons.			Per cent.						
	Male.	Female.	Total		Male.	Female.	Total	Month.	No.	Range.
Under $5 00	8	......	8	7.77	$.75	......	$.75	Jan...	99	99.00
$ 5 00 but under 6 00	1	......	1	.97	.90	......	.90	Feb ..	99	99.00
6 00 but under 7 00	6	......	6	5.82	1.00	......	1.00	Mar...	99	99.00
7 00 but under 8 00	2	......	2	1.94	1.25	......	1.25	April..	98	98.00
8 00 but under 9 00	10	......	10	9.71	1.35	......	1.35	May ..	99	99.00
9 00 but under 10 00	3	......	3	2.91	1.58	......	1.58	June..	99	99.00
10 00 but under 12 00	7	......	7	6.80	1.75	......	1.75	July..	100	100.00
12 00 but under 15 00	42	..	42	40.78	2.048	......	2.048	Aug ..	100	100.00
15 00 but under 20 00	22	......	22	21.36	2.60	......	2.60	Sept..	99	99.00
20 00 and over	2	......	2	1.94	3.50	......	3.50	Oct...	99	99.09
								Nov ..	96	96.00
Total	103	......	103	100.00	$1.881	......	$1.881	Dec...	97	97.00
								Ave....	99	99.00

BEEF AND PORK PACKING—11 ESTABLISHMENTS.

Table A—Showing by occupation, classes, hours of work per day, number and proportion of persons employed, total wages and proportion of wages paid and average wages per day and per hour in each occupation for that portion of the industry reporting employes in detail.

OCCUPATION.	Average hours per day.	PERSONS.		WAGES.			
		Number.	Per cent.	Total per day.	Per cent.	Average.	
						Per day.	Per hour.
Boys	10	58	4.14	$60.92	2.407	$1.05	$0.105
Box makers	10	10	.72	22.50	.889	2.25	.225
Butchers	10	262	18.72	537.00	21.221	2.049	.204
Carpenters	10	5	.36	9.05	.358	1.81	.181
Cooks	10	16	1.14	32.56	1.287	2.035	.203
Electrician	10	1	.07	2.15	.085	2.15	.215
Engineers	10	19	1.36	59.00	2.332	3.105	.310
Fishermen	10	16	1.14	26.56	1.050	1.66	.166
Firemen	10	15	1.07	31.94	1.263	2.29	.229
Gut Cleaners	10	4	.29	6.80	.269	1.70	.170
Killers	10	27	1.93	77.50	3.063	2.87	.287
Killers' helpers	10	5	.36	8.30	.328	1.66	.166
Laborers	10	759	54.21	1,276.21	50.443	1.681	.168
Machinists	10	6	.43	14.70	.581	2.45	.245
Net winders	10	8	.57	16.00	.633	2.00	.200
Packers	10	2	.14	3.66	.145	1.83	.183
Sausage makers	10	122	8.71	221.59	8.759	1.816	.181
Sausage makers' helpers.	10	3	.21	4.50	.178	1.50	.150
Teamsters	10	53	3.79	99.76	3.944	1.882	.188
Watchmen	11.77	9	.64	19.32	.764	2.146	.183
Total and average.	10.01	1,400	100.00	$2,530.02	100.00	$1.80	$0.179
Boat captains	10	6	28.57	$23.64	36.937	$3.94	$0.394
Cashiers, female	10	3	14.28	3.66	5.719	1.22	.122
Foremen	10	7	33.34	26.70	41.719	3.814	.381
Salesmen	10	5	23.81	10.00	15.625	2.00	.200
Total and average.	10	21	100.00	$64.00	100.00	3.047	.304
Male	10	18	85.71	60.34	94.281	3.352	.335
Female	10	3	14.29	3.66	5.719	1.22	.122

Table B—Showing number of persons, male and female, and total number and proportion in each class of employes, classified by weekly earnings received, together with the average wage per day received in each class and the total number of persons employed by months and the range of employment for *all* establishments reporting either as to wages and employes, in detail, or classified weekly earnings.

CLASSIFICATION OF WEEKLY EARNINGS.					AVERAGE WAGES PER DAY.			NO. PERSONS EMP. BY MONTH.		
Classification.	No. of Persons.			Per cent						
	Male.	Female	Total		Male.	Female	Total	Month.	No.	Range.
Under $5 00	9	2	11	$.77	$.741	$.83	$.742	Jan. .	1,067	72.88
$ 5 00 but under 6 00	....	......	....	.	......	......	......	Feb .	889	60.72
6 00 but under 7 00..	28	....	28	1.97	1.00	.. ...	1.00	Mar .	729	49.79
7 00 but under 8 00..	29	....	29	2.04	1.25	.....	1.25	April..	724	49.46
8 00 but under 9 00..	14	..	14	.99	1 361	.. ..	1.361	May .	751	51.30
9 00 but under 10 00	405	......	405	28.50	1.596	......	1.596	June..	1,110	75.82
10 00 but under 12 00	564	....	564	39.69	1.767	....	1.767	July..	1,221	83 40
12 00 but under 15 00..	241	1	242	17 03	2.063	2.00	2.063	Aug ..	1,157	72.20
15 00 but under 20 00..	110	......	110	7.74	2 638	......	2.638	Sept..	1,226	83.74
20 00 and over..........	18	.. ..	18	1.27	3.898	.....	3.898	Oct...	1,093	74.66
								Nov...	1,416	96.72
Total	1,418	3	1,421	100.00	$1.827	$1.22	$1.825	Dec ..	1,464	100.00
								Ave...	1,071	73.15

BLANK BOOKS AND BINDING—11 ESTABLISHMENTS.

Table A—Showing by occupation, classes, hours of work per day, number and proportion of persons employed, total wages and proportion of wages paid and average wages per day and per hour in each occupation for that portion of the industry reporting employes in detail.

OCCUPATION.	Average hours per day.	PERSONS.		WAGES.			
		Number.	Per cent.	Total per day.	Per cent.	Average.	
						Per day.	Per hour.
Apprentices	9.50	2	1.37	$0.93	.527	.465	$0.049
Book binders	9.08	45	30.82	82.47	46.768	1.830	.202
Book binders, female	9	62	42.47	42.85	24.300	.691	.076
Bk. fold. & sew'r, female	9.25	4	2.74	3.35	1.900	.837	.090
Envelope makers	9	2	1.37	5.16	2.926	2.580	.286
Envelope makers, female	9	7	4.80	6.20	3.516	.885	.098
Feeders, female	9	2	1.37	1.33	.754	.665	.073
Helpers, female	9.83	3	2.06	1.56	.884	.520	.053
Holders, female	9	3	2.06	3.09	1.752	1.030	.114
Machine tenders, female	10	5	3.42	4.20	2.382	.840	.084
Machinists	10	8	5.48	20.95	11.882	2.619	.261
Paper cutter	10	1	.68	1.75	.992	1.750	.175
Porter	10	1	.68	1.75	.992	1.750	.175
Ruler	9	1	.68	.75	.425	.750	.083
Total and average	9.16	146	100.00	$176.34	100.000	$1.208	$0.131
Male	9.25	60	41.10	113.76	64.568	1.896	.205
Female	9.09	86	58.90	62.58	35.432	.728	.080
Office boy	10	1	25.00	$0.50	9.141	$0.500	$0.050
Shipping clerks	9	3	75.00	4.97	90.859	1.657	.184
Total and average	9.25	4	100.00	$5.47	100.000	$1.367	$0.147

Table B—Showing number of persons, male and female, and total number and proportion in each class of employes, classified by weekly earnings received, together with the average wage per day received in each class and the total number of persons employed by months and the range of employment for *all* establishments reporting either as to wages and employes, in detail, or classified weekly earnings.

CLASSIFICATION OF WEEKLY EARNINGS.					AVERAGE WAGE PER DAY.			NO. PERSONS EMP. BY MONTH.		
Classification.	No. of Persons.			Per cent.						
	Male	Female.	Total		Male	Female.	Total	Month.	No.	Range.
Under $5 00	30	169	199	49 50	$ 684	$.614	$.624	Jan.	378	97.61
$ 5 00 but under 6 00	3	26	29	7.21	.910	.913	.913	Feb.	359	92.53
6 00 but under 7 00	10	14	24	5.97	1.020	1.034	1.033	Mar.	359	92.53
7 00 but under 8 00	15	10	25	6.22	1.303	1.230	1.261	April.	363	93.56
8 00 but under 9 00	12	2	14	3.48	1.405	1.400	1.405	May	347	89.43
9 00 but under 10 00	15	4	19	4.73	1.512	1.500	1 512	June	348	89.69
10 00 but under 12 00	28	4	32	7.96	1 816	1.750	1.816	July	348	89.69
12 00 but under 15 00	33	1	34	8.46	2.128	2.250	2.135	Aug.	346	89.20
15 00 but under 20 00	25	....	25	6.22	2.790	......	2.790	Sept	362	93.30
20 00 and over	1	....	1	.25	3.500	.....	3.500	Oct.	388	100.00
								Nov	386	99.48
Total	172	230	402	100.00	$1.865	$.728	$1.214	Dec.	387	99.74
								Ave.	364	93.81

BOXES, PACKING—26 ESTABLISHMENTS.

Table A—Showing by occupation, classes, hours of work per day, number and proportion of persons employed, total wages and proportion of wages paid and average wages per day and per hour in each occupation for that portion of the industry reporting employes in detail.

OCCUPATION.	Average hours per day.	PERSONS.		WAGES.			
		Number.	Per cent.	Total per day.	Per cent.	Average.	
						Per day.	Per hour.
Basket makers	10	12	1.09	$27.00	1.877	$2.25	$0.225
Box packers, female	10	55	5.01	41.25	2.867	.75	.075
Boys	10	76	6.93	62.40	4.338	.821	.082
Box rippers	10	3	.27	5.50	.383	1.833	.183
Carpenters	10	82	7.48	151.10	10.5 6	1.842	.184
Cross cutters	10	12	1.09	17.25	1.200	1.437	.143
Engineers	10.22	9	.82	19.50	1.355	2.166	.211
Filers	10	11	1.00	26.75	1.860	2.432	.243
Firemen	11.20	5	.46	8.45	.518	1.69	.150
Graders	10	1	.09	1.75	.122	1.75	.175
Helpers	10	132	12.03	121.40	8.440	.919	.091
Helpers, female	10	5	.46	3.25	.226	.65	.065
Laborers	9.99	434	39.56	527.85	36.697	1.216	.121
Machinists	10	32	2.92	63.00	4.379	1.969	.196
Machine tenders	9.90	41	3.74	66.63	4.633	1.625	.164
Machine tenders' helpers	10	4	.36	5.40	.375	1.35	.135
Millmen	10	26	2.37	34.25	2.382	1.317	.131
Millwrights	10	2	.18	4.75	.330	2.375	.237
Nailers	10	16	1.46	28.50	1.982	1.781	.178
Nailers, females	10	24	2.20	18.00	1.251	.75	.075
Planers	10	5	.46	8.30	.577	1.66	.166
Pressmen	10	1	.09	3.75	.260	3.75	.375
Sawyers	10	63	5.76	119.15	8.284	1.897	.189
Teamsters	10	18	1.64	30.20	2.170	1.678	.167
Watchmen	11	3	.27	5.50	.382	1.833	.166
Yardmen	10	25	2.28	37.50	2.607	1.50	.150
Total	10.00	1,097	100.00	$1,438.38	100.000	$1.311	$0.131
Male	10	1,013	92.35	$1,375.88	95.65	$1.358	$0.136
Female	10	84	7.65	62.50	4.35	.744	.074
Foremen	10	18	81.82	$47.35	85.93	$2.63	$0.263
Shippers	11	4	18.18	7.75	14.07	1.937	.193
Total and average	10	22	100.00	$55.10	100.00	$2.504	$0.250

Table B—Showing number of persons, male and female, and total number and proportion in each class of employes, classified by weekly earnings received, together with the average wage per day received in each class and the total number of persons employed by months and the range of employment for *all* establishments reporting either as to wages and employes, in detail, or classified weekly earnings.

CLASSIFICATION OF WEEKLY EARNINGS.					AVERAGE WAGES PER DAY.			NO PERSONS EMP. BY MONTH.		
Classification.	No. of Persons.			Per cent.						
	Male.	Female.	Total		Male.	Female	Total	Month.	No.	Range.
Under $5 00	247	84	331	26.06	$.665	$.744	$.686	Jan.	1,301	85.54
$5 00 but under 6 00	39	.....	39	3.07	.875	.....	.875	Feb.	1,311	86.13
6 00 but under 7 00	108	.....	108	8.51	1.038	.....	1.038	Mar	1,415	93.03
7 00 but under 8 00	110	.....	110	8.66	1.253	.....	1.253	Apr.	1,450	95.33
8 00 but under 9 00	110	.....	110	8.66	1.377	.....	1.377	May	1,461	96.05
9 00 but under 10 00	254	.....	254	20.00	1.524	.....	1.524	June	1,508	99.14
10 00 but under 12 00	148	.....	148	11.65	1.765	.....	1.765	July	1,521	100.00
12 00 but under 15 00	110	.....	110	8.66	2.049	.....	2.049	Aug	1,501	98.68
15 00 but under 20 00	57	.....	57	4.49	2.628	.....	2.628	Sept	1,479	97.24
20 00 and over	3	.....	3	.24	4.500	.....	4.500	Oct.	1,447	95.13
								Nov.	1,378	90.59
Total	1,186	84	1,270	100.00	$1.382	$.744	$1.334	..	1,334	87.71
								Ave.	1,426	93.75

BOXES, PAPER AND CIGAR—13 ESTABLISHMENTS.

Table A—Showing by occupation, classes, hours of work per day, number and proportion of persons employed, total wages and proportion of wages paid and average wages per day and per hour in each occupation for that portion of the industry reporting employes in detail.

OCCUPATION.	Average hours per day.	PERSONS.		WAGES.			
		Number.	Per cent.	Total per day.	Per cent.	Average.	
						Per day.	Per hour.
Box makers	9.12	71	9.97	$91.37	12.329	$1.286	$0.141
Box makers, female	9.38	254	35.67	190.16	25.659	.749	.079
Carpenters	10	1	.14	1.12	.151	1.12	.112
Cuttermen	10	18	2.53	22.69	3.062	1.26	.126
Ender	10	1	.14	2.25	.303	2.25	.225
Engineers	10	2	.28	4.17	.563	2.085	.208
Glue worker, female	10	1	.14	.67	.090	.67	.067
Helpers	9.92	103	14.47	114.72	15.479	1.113	.112
Helpers, female	10	19	2.67	13.68	1.846	.72	.072
Laborers	10	15	2.11	25.00	3.373	1.666	.166
Machinists	10	7	.98	17.50	2.361	2.50	.251
Machine tenders	10	50	7.02	98.09	13.235	1.961	.196
Machine girls	10	6	.84	3.00	.405	.50	.050
Nailers	10	2	.28	3.50	.472	1.75	.175
Nailers, female	10	2	.28	1.34	.181	.67	.067
Pattern maker	10	1	.14	2.00	.270	2.00	.200
Painters	10	11	1.55	11.91	1.607	1.08	.108
Painter, female	10	1	.14	1.33	.180	1.33	.133
Piece workers, female	10	82	11.52	74.30	10.025	.906	.090
Press feeders, female	10	2	.28	2.00	.270	1.00	.100
Sander	10	1	.14	1.25	.169	1.25	.125
Sawyers	10	8	1.13	11.17	1.507	1.296	.129
Scorer	10	1	.14	3.00	.405	3.00	.300
Teamsters	9	2	.28	2.58	.348	1.29	.143
Trimmers, female	10	50	7.02	41.02	5.535	.82	.082
Watchman	12	1	.14	1.30	.175	1.30	.108
Total	9.81	712	100.00	$741.12	100.000	$1.041	$0.106
Male	9.76	295	41.43	$427.30	57.656	$1.448	$0.148
Female	9.62	417	58.57	$313.82	42.344	.752	.078
Forewomen	10	2	22.22	$2.00	10.433	$1.00	$0.100
Foremen	9.66	6	66.67	16.00	83.464	2.666	.275
Office girl	10	1	11.11	1.17	6.103	1.17	.117
Total	9.77	9	100.00	$19.17	100.000	$2.13	$0.218
Male	9.66	6	66.67	$16.00	83.464	$2.666	$0.275
Female	10	3	33.33	3.17	16.536	1.057	.105

Table B—Showing number of persons, male and female, and total number and proportion in each class of employes, classified by weekly earnings received, together with the average wage per day received in each class and the total number of persons employed by months and the range of employment for *all* establishments reporting either as to wages and employes, in detail, or classified weekly earnings.

CLASSIFICATION OF WEEKLY EARNINGS					AVERAGE WAGES PER DAY.			NO. PERSONS EMP. BY MONTH.		
Classification.	No. of Persons.			Per cent.						
	Male.	Female	Total		Male	Female	Total	Month.	No.	Range
Under $5 00	91	248	339	43.46	$.689	$ .635	$.648	Jan	663	84.57
$ 5 00 but under 6 00	3	58	61	7.82	.90	.894	.894	Feb	672	85.71
6 00 but under 7 00	34	109	143	18.33	1.008	1.001	1.003	Mar	699	89.16
7 00 but under 8 00	53	12	65	8.33	1.254	1.25	1.252	April	724	92.35
8 00 but under 9 00	6	....	6	.77	1.34	....	1.34	May	727	92.73
9 00 but under 10 00	57	3	60	7.69	1.556	1.50	1.553	June	749	95 53
10 00 but under 12 00	25	1	26	3.33	1.743	1.75	1.744	July	762	97.19
12 00 but under 15 00	58	.....	58	7.44	2.083	.....	2.083	Aug	773	98.58
15 00 but under 20 00	20	......	20	2.57	2.579	..	2.579	Sept	780	99.49
20 00 and over	2	......	2	.26	3.50	......	3.50	Oct	784	100.00
								Nov	771	98.31
Total	349	431	780	100.00	$1.472	$.754	$1.054	Dec	749	95.53
								Av	738	94.13

BOILERS AND TANKS—18 ESTABLISHMENTS.

Table A—Showing by occupation, classes, hours of work per day, number and proportion of persons employed, total wages and proportion of wages paid and average wages per day and per hour in each occupation for that portion of the industry reporting employes in detail.

Occupation.	Average hours per day.	Persons. Number.	Persons. Per cent.	Wages. Total per day.	Wages. Per cent.	Wages. Average. Per day.	Wages. Average. Per. hour
Apprentices	10	16	3.66	$10.05	1.247	$0.628	$0.062
Blacksmiths	10	4	.92	9.00	1.117	2.25	.225
Blacksmiths, helpers	10	2	.46	3.00	.373	1.50	.150
Boiler makers	10	129	29.46	295.70	36.697	2.501	.250
Boiler makers, helpers	10	148	33.69	232.70	28.879	1.572	.157
Carpenters	10	1	.23	1.70	.212	1.70	.170
Engineers	10	3	.69	6.35	.789	2.117	.211
Furnace tenders	10	1	.23	2.10	.261	2.10	.210
Handy men	10	10	2.29	17.50	2.173	1.75	.175
Helpers	10	30	6.85	45.25	5.616	1.508	.150
Iron workers	10	1	.23	4.00	.497	4.00	.400
Laborers	10	42	9.59	73.20	9.085	1.743	.174
Machinists	10	18	4.11	41.75	5.182	2.32	.232
Moulders	9.88	9	2.06	21.75	2.699	2.416	.244
Moulders, helpers	10	5	1.16	7.70	.956	1.54	.154
Pattern makers	10	1	.23	2.50	.311	2.50	.250
Picklers	10	1	.23	2.00	.249	2.00	.200
Plumbers	10	2	.46	4.00	.497	2.00	.200
Pressmen	10	3	.69	6.75	.838	2.25	.225
Rivet heaters	10	4	.92	4.00	.497	1.00	.100
Steam fitters	10	2	46	4.00	.497	2.00	.200
Teamsters	10	2	.46	3.15	.390	1.575	.157
Tinners	10	1	.23	2.35	.292	2.35	.235
Watchmen	10	3	.69	5.20	.646	1.733	.173
Total	9.99	438	100.00	$805.70	100.000	$1.839	$0.184

Table B—Showing number of persons, male and female, and total number and proportion in each class of employes, classified by weekly earnings received, together with the average wage per day received in each class and the total number of persons employed by months and the range of employment for *all* establishments reporting either as to wages and employes, in detail, or classified weekly earnings.

Classification of Weekly Earnings. Classification.	No. of Persons. Male.	No. of Persons. Female.	No. of Persons. Total	Per cent.	Average Wages per Day. Male.	Average Wages per Day. Female	Average Wages per Day. Total	No. Persons Emp. by Month. Month.	No. Persons Emp. by Month. No.	No. Persons Emp. by Month. Range.
Under $5 00	19	......	19	2.48	$.561	......	$.561	Jan.	636	100.00
$ 5 00 but under 6 00	4	.....	4	.53	.850	......	.850	Feb	614	96.54
6 00 but under 7 00	21	......	21	2.74	1.000	......	1.000	Mar	610	95.91
7 00 but under 8 00	24	.....	24	3.13	1.250	......	1.250	April	586	92.14
8 00 but under 9 00	33	......	33	4.31	1.400	......	1.400	May	565	88.84
9 00 but under 10 00	201	.....	201	26.20	1.525	......	1.525	June	573	90.09
10 00 but under 12 00	170	.....	170	22 16	1.773	.....	1.773	July	554	87.11
12 00 but under 15 00	158	......	158	20.59	2.084	......	2.084	Aug	567	89.15
15 00 but under 20 00	133	..	133	17.33	2.755	....	2.755	Sept	583	91.67
20 00 and over	4	....	4	.53	3.825	......	3.825	Oct	577	90.72
								Nov	529	83.18
Total	767	.....	767	100.00	$1.839	......	$1.839	Dec	522	82.08
								Ave.	576	90.57

BOOTS AND SHOES—23 ESTABLISHMENTS.

Table A—Showing by occupation, classes, hours of work per day, number and proportion of persons employed, total wages and proportion of wages paid and average wages per day and per hour in each occupation for that portion of the industry reporting employes in detail.

Occupation	Average hours per day.	Persons.		Wages.			
		Number.	Per cent.	Total per day	Per cent.	Average.	
						Per day.	Per hour.
Beatersout	10	1	.09	$1.05	.069	$1.050	$0.105
Cutters	9.50	24	2.14	50.75	3.302	2.115	.222
Engineers	10	1	.08	2.00	.130	2.000	.200
Finishers	9.78	7	.62	11.35	.732	1.621	.166
Finishers, helpers	10	2	.18	3.00	.195	1.500	.150
Finishers, female	10	7	.62	3.99	.260	.570	.057
Fitters	10	2	.18	3.67	.239	1.835	.183
Fitters, female	10	13	.16	11.56	.752	.889	.088
Hand workers	10	62	5.53	113.56	7.388	1.831	.183
Heelers	10	6	.53	7.53	.490	1.255	.125
Laborers	9.64	14	1.25	16.68	1.085	1.184	.122
Lasters	9.83	30	2.67	60.07	3.907	2.002	.203
Machine workers, female	10	27	2.42	33.50	2.180	1.240	.124
Machine hands	10	32	2.85	64.00	4.163	2.000	.200
Machine operators	9.72	18	1.61	29.10	1.893	1.611	.165
Mach. operators, female	9.70	20	1.78	19.33	1.258	.965	.099
Mach. operators, helpers	9.30	36	3.21	27.14	1.766	.754	.081
Female	9.38	31	2.76	22.84	1.485	.737	.076
Packers	10	2	.18	4.25	.277	2.125	.212
Packers, female	9.50	3	.27	1.05	.068	.350	.036
Polishers	9.50	3	.27	3.75	.245	1.250	.131
Shoemakers	9.23	77	6.68	162.24	10.554	2.107	.228
Shoemakers, female	9	1	.09	3.50	.228	3.500	.338
Shoe workers	10	325	28.97	520.21	33.841	1.600	.160
Shoe workers, female	10	286	25.49	267.25	17.385	.934	.093
Staker	10	1	.08	1.50	.098	1.500	.150
Stitchers	9.08	24	2.14	30.76	2.001	1.281	.141
Stitchers, female	9.35	51	4.55	49.89	3.246	.978	.104
Sweepers	10	1	.09	.75	.049	.750	.075
Sweepers, female	10	2	.18	2.00	.130	1.000	.100
Table girls	10	12	1.07	7.20	.469	.600	.060
Watchmen	12	1	.08	1.75	.114	1.750	.145
Total	9.83	1,122	100.00	$1,537.22	100.000	$1.37	$0.139
Male	9.82	669	59.63	$1,109.70	72.19	$1.659	$0.168
Female	9.84	453	40.37	427.52	27.81	.931	.094
Foremen	9.93	8	36.36	$22.00	52.47	$2.750	$0.276
Forewomen	9.87	4	18.18	5.41	12.90	1.352	.136
Shipping clerk	9.83	6	27.28	7.70	18.36	1.283	.131
Shipping clerk, female	9.87	4	18.18	6.82	16.27	1.705	.172
Total	9.88	22	100.00	$41.93	100.00	$1.906	$0.192
Male	9.89	14	63.53	$29.70	70.83	$2.121	$0.214
Female	9.87	8	36.36	12.23	29.17	1.528	.154

Table B—Showing number of persons, male and female, and total number and proportion in each class of employes, classified by weekly earnings received, together with the average wage per day received in each class and the total number of persons employed by months and the range of employment for *all* establishments reporting either as to wages and employes, in detail, or classified weekly earnings.

Classification of Weekly Earnings.					Average Wages Per Day.			No. Persons Emp. by Month.		
Classification.	No. of Persons.			Per cent.						
	Male.	Female.	Total		Male.	Female.	Total	Month	No.	Range.
Under $ 5 00	189	284	473	23.38	$.729	$6.92	$.703	Jan..	2,039	97.98
$ 5 00 but under 6 00	44	77	121	5,98	.898	.926	916	Feb .	2,025	97.31
6 00 but under 7 00	94	183	277	13.70	1.034	1.006	1.014	Mar ..	2,017	96.92
7 00 but under 8 00	103	93	196	9.69	1.240	1.243	1.241	April .	1,929	92.70
8 00 but under 9 00	64	33	97	4.80	1.376	...	1.376	May .	1,837	88.27
9 00 but under 10 00	125	31	156	7.71	1.516	1 500	1,514	June .	1,943	93.37
10 00 but under 12 00	216	25	241	11.91	1.696	1.752	1.698	July..	2,024	92.26
12 00 but under 15 00	225	18	243	12 01	2.039	2.062	2.033	Aug ..	1,992	95.72
15 00 but under 20 00	191	3	194	9 59	2.692	....	2.692	Sept .	1,990	95 63
20 00 and over	24	1	25	1.23	3.500	3.500	3.500	Oct ..	1,962	94.28
								Nov ..	2,042	98.12
Total	1.275	748	2,023	100.00	$1,678	$.942	$1.380	Dec...	2,081	100.00
								Ave...	1,990	95.63

BRASS AND COPPER GOODS—13 ESTABLISHMENTS.

Table A—Showing by occupation classes, hours of work per day, number and proportion of persons employed, total wages and proportion of wages paid and average wages per day and per hour in each occupation for that portion of the industry reporting employes in detail.

Occupation.	Average hours per day.	Persons.		Wages.			
		Number.	Per cent.	Total per day.	Per cent.	Average.	
						Per day.	Per hour.
Apprentices	10	22	3.179	$18.85	1.451	$0.857	$0.085
Assemblers	9	9	1.300	18.00	1.386	2.000	.222
Blacksmiths	10	13	1.878	32.67	2.515	2.513	.251
Brass finishers	9.66	36	5.202	72.48	5.581	2.013	.208
Brass machine hands	10	56	8.092	96.35	7.419	1.720	.172
Buffers	9.41	24	3.468	49.93	3.844	2.080	.210
Carpenters	10	5	.723	9.50	.731	1.900	.190
Coppersmiths	8.88	9	1.300	26.80	2.063	2.987	.336
Core makers	9.68	19	2.745	25.05	1.929	1.318	.136
Core makers. female	10	36	5.202	26.37	2.031	.732	.073
Cupola tenders	10	1	.144	2.42	.186	2.420	.242
Engineers	10	2	.289	5.67	.436	2.835	.283
Firemen	10	1	.144	1.70	.131	1.700	.170
Furnace tenders	10	3	.434	7.25	.558	2.416	.241
Grinders	10	3	.434	4.00	.308	1.333	.133
Helpers	9.87	78	11.281	72.39	5.574	.928	.094
Helpers. female	10	7	1.011	5.60	.431	.800	.080
Laborers	9.88	90	13.005	145.39	11.950	1.615	.163
Lath hands	9	21	3.034	31.50	2.435	1.500	.166
Locksmiths	10	4	.578	8.85	.692	2.212	.221
Machinists	10	56	8.902	147.94	11.391	2.641	.264
Machine tenders	10	30	4.335	40.20	3.095	1.340	.134
Melters	10	1	.144	2.50	.192	2.500	.250
Moulders	9.89	80	11.560	216.68	16.684	2.708	.273
Nickel platers	10	2	.289	4.50	.252	2.250	.225
Oven tenders	10	2	.289	3.25	.160	1.625	.162
Pattern makers	10	26	3.757	61.91	4.677	2.381	.238
Polishers	9.58	17	2.457	43.42	3.253	2.554	.266
Watchmen	11.25	4	.578	6.54	.414	1.635	.145

BRASS AND COPPER GOODS—13 ESTABLISHMENTS—Continued.

OCCUPATION.	Average hours per day.	PERSONS.		WAGES.			
		Number.	Per cent.	Total per day.	Per cent.	Average.	
						Per day.	Per hour.
Wire drawers	10	3	.434	4.50	.252	1.500	.150
Wire sewers, female	10	9	1.300	6.57	.417	.730	.073
Wire weavers	10	23	3.332	99.50	7.563	4.326	.432
Total and average	9.85	692	100.00	$1,298.28	100.00	$1.876	$0.190
Male	9.84	640	92.48	$1,259.74	97.03	$1.968	$0.200
Female	10	52	7.52	38.54	2.97	.743	.074
Bookkeeper, female	8	1	16.667	$1.00	7.364	$1.000	$0.125
Foremen	10	2	33.333	5.83	42.930	2.915	.291
Shipping clerks	10	2	33.333	4.25	31.296	2.125	.212
Time keeper	10	1	16.667	2.50	18.410	2.500	.250
Total and average	9.66	6	100.000	$13.58	100.000	$2.163	$0.223
Male	10	5	83.33	$12.58	92.64	$2.516	$0.251
Female	8	1	16.67	1.00	7.36	1.000	.125

Table B—Showing number of persons, male and female, and total number and proportion in each class of employes, classified by weekly earnings received, together with the average wage per day received in each class and the total number of persons employed by month and the range of employment for *all* establishments, reporting either as to wages and employes, in detail, or classified weekly earnings.

CLASSIFICATION OF WEEKLY EARNINGS.					AVERAGE WAGES PER DAY.			NO. PERSONS EMP. BY MONTH.		
Classification.	No. of Persons.			Per cent.						
	Male.	Female.	Total		Male.	Female.	Total	Month.	No.	Range.
Under $5 00	66	31	97	12.678	$.676	$ .605	$.653	Jan	733	97.09
$ 5 00 but under 6 00	13	13	26	3.398	.887	.876	.882	Feb	728	96.42
6 00 but under 7 00	28	9	37	4.836	1.021	1.042	1.026	Mar	749	99 21
7 00 but under 8 00	20	......	20	2 614	1 247	....	1.247	April	752	99.60
8 00 but under 9 00	14	......	14	1.830	1.362	......	1.362	May	755	100.00
9 00 but under 10 00	158	......	158	20.654	1.561	......	1.561	June	745	98.68
10 00 but under 12 00	64	......	64	8.365	1.782	......	1.782	July	710	94.04
12 00 but under 15 00	155	..	155	20.269	2.171	......	2.171	Aug	730	96.70
15 00 but under 20 00	158	......	158	20.654	2.777	.....	2.777	Sept	697	92.32
20 00 and over	36	......	36	4.702	4.152	....	4.152	Oct	661	87.68
								Nov	647	85.70
Total	712	53	765	100.00	$1.972	$.746	$1.879	Dec	621	82.25
								Ave	656	87.02

BREWERIES—57 ESTABLISHMENTS.

Table A—Showing by occupation classes, hours of work per day, number and proportion of persons employed, total wages and proportion of wages paid and average wages per day and per hour in each occupation for that portion of the industry reporting employes in detail.

OCCUPATION.	Average hours per day.	PERSONS.		WAGES.			
		Number.	Per cent.	Total per day.	Per cent.	Average.	
						Per cent.	Per hour.
Barnmen	9.19	26	1.05	$55.63	1.246	$2.14	$0.232
Blacksmiths	10	3	.12	8.50	.190	2.833	.283
Boiler men	9.53	17	.69	41.34	.926	2.432	.255
Bottlers	9.59	39	1.58	80.06	1.793	2.05	.213
Bottlers, female	8	12	.49	12.00	.269	1.00	.125
Box makers	8	170	6.89	319.60	7.156	1.88	.235
Box packers	8	190	6.70	357.20	7.998	1.88	.235
Brewers	9.04	158	6.40	373.06	8.351	2.36	.261
Canvass men	8	2	.08	5.00	.112	2.50	.312
Car packers	8	23	.93	50.56	1.132	2.197	.274
Carpenters	8.09	53	2.15	134.50	3.012	2.528	.312
Cellar men	8.32	124	5.02	297.94	6.672	2.403	.264
Coopers	8.01	157	6.36	385.34	8.628	2.454	.306
Corkers	8	165	6.68	169.30	3.791	1.026	.128
Electricians	8	3	.12	7.35	.165	2.45	.306
Elevator men	8	2	.08	5.11	.114	2.555	.319
Engineers	9.21	28	1.13	71.36	1.598	2.548	.276
Firemen	9.37	16	.65	34.50	.772	2.156	.230
Harness makers	8	1	.06	2.50	.056	2.50	.312
Helpers	8.71	191	7.74	228.68	5.120	1.197	.137
Helpers, female	9.66	12	.49	9.09	.204	.757	.078
Keg washers	8.08	71	2.88	157.18	3.519	2.213	.273
Kettlemen	8.06	32	1.30	77.83	1.743	2.432	.301
Label girls	8	109	7.25	60.35	1.351	.553	.069
Laborers	9.89	179	5.10	319.35	7.150	1.784	.180
Machine boys	8	126	2.27	163.80	3.668	1.30	.162
Malsters	9.78	56	.69	121.07	2.711	2.162	.221
Masons	8	17	.73	56.53	1.266	3.325	.415
Millwrights	8	18	.89	49.44	1.107	2.746	.343
Machinists	8.54	22	.20	52.97	1.186	2.407	.283
Oilers	8	5	.85	12.50	.280	2.50	.312
Painters	8.09	21	1.26	50.60	1.133	2.41	.297
Peddlers	9.12	31	.32	77.71	1.74	2.506	.274
Steamfitters	8	8	6.12	23.35	.523	2.919	.364
Teamsters	9.54	151	.28	318.11	7.123	2.106	.220
Tinners	8	7	.97	17.73	.397	2.533	.316
Wagon makers	8	24	4.42	54.75	1.226	2.281	.285
Wagon helpers	8	1	.05	.58	.013	.58	.072
Washerhouse, male	10	5	.20	10.56	.236	2.112	.211
Washerhouse, female	8	174	7.05	153.12	3.428	.88	.110
Watchmen	9.64	17	.69	35.38	.792	2.081	.215
Weighers	10	2	.08	4.62	.103	2.31	.231
Total and average	8.51	2,468	100.00	$4,466.14	100.000	$1.809	$0.212
Male	8.58	2,161	88.46	$4,231.58	94.75	$1.957	$0.228
Female	8.06	307	11.54	234.56	5.25	.763	.094
Barkeepers	8	1	6.25	$2.25	5.872	$2.25	$0.281
Bookkeepers	10	3	18.75	4.66	12.161	1.553	.155
Collectors	8	1	6.25	2.75	7.176	2.75	.343
Foremen	9.26	11	68.75	28.66	74.791	2.605	.281
Total and average	9.25	16	100.00	$38.32	100.000	$2.395	$0.258

BRASS AND COPPER GOODS—13 EST

OCCUPATION.	Average hours per day.	PERSONS Number.
Wire drawers	10	
Wire sewers, female	10	
Wire weavers	10	
Total and average	9.85	
Male	9.84	
Female	10	
Bookkeeper, female	8	
Foremen	10	
Shipping clerks	10	
Time keeper	10	
Total and average	9.66	
Male	10	
Female	8	

Table B—Showing number of
proportion in each class
together with the avera
number of persons em
establishments, report
sified weekly earnings.

CLASSIFICATION OF W

Classification.
Under $5
$ 5 00 but under
6 00 but under
7 00 but under
8 00 but under
9 00 but under
10 00 but under
12 00 but under
15 00 but under
20 00 and over
Total....

number of persons, male and female, and total number and class of employes, classified by weekly earnings received, the average wage per day received in each class and the total sons employed by month and the range of employment for *all* reporting either as to wages and employes, in detail or class- arnings.

n OF WEEKLY EARNINGS.					AVERAGE WAGES PER DAY.			NO. PERSONS EMP. BY MONTH.		
n.	No. of Persons.			Per cent						
	Male	Female.	Total		Male.	Female.	Total	Month.	No.	Range.
$5 00..	19	......	19	3.57	$.668	......	$.668	Jan...	87	17.61
6 00..	4	......	4	.75	.900	......	.900	Feb...	60	12.15
7 00..	18	......	18	3.38	1.080	....	1.080	Mar .	149	30.16
er 8 00..	7	......	7	1.32	1.250	......	1.250	April..	270	54.66
er 9 00..	2	....	2	.38	1.350	......	1.350	May..	347	70.24
er 10 00	344	......	344	64.66	1.585	......	1.585	June..	405	81.98
er 12 00	93	......	93	17.48	1.813	......	1.813	July..	473	95.75
er 15 00..	35	....	35	6.58	2.148	......	2.148	Aug...	494	100.00
ter 20 00..	8	....	8	1.50	2.650	......	2,650	Sept..	447	90.49
er	2	......	2	.38	5.000	......	5.000	Oct...	389	78.74
								Nov...	238	48.18
....	532	......	532	100.00	$1.621	......	$1.621	Dec...	108	21.86
								Ave..	289	5.850

BROOMS AND BRUSHES—8 ESTABLISHMENTS.

Showing by occupation classes, hours of work per day, number and rtion of persons employed, total wages and proportion of wages paid average wages per day and per hour in each occupation for that portion industry reporting employes in detail.

OCCUPATION.	Average hours per day.	PERSONS.		WAGES.			
		Number.	Per cent.	Total per day.	Per cent.	Average.	
						Per day.	Per hour.
ers	9.33	3	4.78	$7.00	7.246	$2.333	$0.250
stle mixers	9.33	2	3.17	4.00	4.141	2.00	.214
oom makers	9.85	14	22.22	25.40	26.294	1.814	.184
rpenter	9.33	1	1.59	2.80	2.899	2.80	.300
ementer	9.33	1	1.59	2.00	2.070	2.00	.214
Draw hands	9.33	4	6.35	7.00	7.248	1.75	.187
Finishers	9.33	2	3.17	3.25	3.364	1.625	.174
Graders	10	1	1.59	.90	.932	.90	.090
Helpers	9.54	16	25.40	15.10	15.631	.94	.097
Machinists	9.33	2	3.17	5.75	5.952	2.875	.308
Set hands	9.33	4	6.35	8.50	8.799	2.125	.227
Sewers	9.50	2	3.17	2.50	2.588	1.25	.131
Sorters	10	2	3.17	1.40	1.449	.70	.070
Testers	9.33	3	4.78	4.50	4.658	1.50	.160
Trimmers	9.33	2	3.17	2.00	2.070	1.00	.107
Winders	10	2	3.17	4.00	4.141	2.00	.200
Zisers	4	2	3.17	.50	.518	.25	.062
Total	9.39	63	100.00	$96.60	100.00	$1.533	$0.163
Bookkeeper	10	1	20.00	$1.00	10.363	$1.00	$0.100
Manager	10	1	20.00	2.00	20.725	2.00	.200
Salesmen	10	2	40.00	4.00	41.451	2.00	.200
Shipping clerk	9.33	1	20.00	2.65	27.461	2.65	.284
Total	9.86	5	100.00	$9.65	100.00	$1.93	$0.195

Table B—Showing number of persons, male and female, and total number and proportion in each class of employes, classified by weekly earnings received, together with the average wage per day received in each class and the total number of persons employed by month and the range of employment for *all* establishments reporting either as to wages and employes, in detail, or classified weekly earnings.

CLASSIFICATION OF WEEKLY EARNINGS.					AVERAGE WAGES PER DAY.			NO. PERSONS EMP. BY MONTH.		
Classification.	No. of Persons.			Per cent.						
	Male.	Female.	Total		Male.	Female.	Total	Month.	No.	Range.
Under $ 5 00	120	186	306	8 87	$.638	$.638	$.638	Jan...	2,772	88.99
$ 5 00 but under 6 00	72	216	288	8.35	.885	.885	.885	Feb .	2,661	85.92
6 00 but under 7 00	133	16	149	4.32	1.084	1.084	1.084	Mar	2,744	88.09
7 00 but under 8 00	219	......	219	6 35	1.293	.....	1.293	April .	2,767	88.83
8 00 but under 9 00	52	.....	52	1.51	1.395	......	1.395	May	2,887	92.68
9 00 but under 10 00	151	......	151	4.37	1.552	..	1.552	June..	3,027	97.18
10 00 but under 12 00	560	......	560	16.23	1.852	......	1.852	July .	3,115	100.00
12 00 but under 15 00	1,169	......	1,169	33.88	2 233	......	2.233	Aug ..	3,054	98.04
15 00 but under 20 00	514	......	514	14.90	2.689	.....	2.689	Sept..	2,982	95.73
20 00 and over	42	.....	42	1.22	4.022	..	4.022	Oct ..	2,685	86.19
								Nov ..	2,632	84.49
Total	3,032	418	3.450	100.00	1,813	......	1.813	Dec	2,621	84.14
								Ave ..	2,829	90 82

BRICK AND TILE—10 ESTABLISHMENTS.

Table A—Showing by occupation classes, hours of work per day, number and proportion of persons employed, total wages and proportion of wages paid and average wages per day and per hour in each occupation for that portion of the industry reporting employes in detail.

OCCUPATION.	Average hours per day.	PERSONS.		WAGES.			
						Average.	
		Number.	Per cent	Total per day.	Per cent.	Per day.	Per hour.
Boys	10	14	3.444	$10.75	1.635	$0.767	.076
Burners	12	19	2.214	25.30	3.847	2.811	.234
Burners, helpers	12	6	1.476	11.76	1.790	1.96	.163
Carpenters	10	2	.492	3.95	.60	1.975	.197
Catchers	10	7	1.722	11.55	1.775	1.65	.165
Engineers	10	5	1.230	9.46	1.440	1.892	.189
Laborers	10	244	59.922	375.55	57.288	1.539	.153
Loaders	10	23	5.658	37.50	5.7 0	1.63	.163
Machine men	10	27	6.642	47.47	7.216	1.755	.175
Masons	10	1	.246	2.15	.330	2.15	.215
Setters	10	8	1.958	17.70	2.691	2.212	.221
Sorters	10	7	1.722	14.80	2.251	2.114	.211
Teamsters	10	8	1.958	12.40	1.887	1.55	.155
Truckers	10	23	5.658	37.95	5.770	1.65	.165
Wheelers	10	23	5,658	38.15	5.8 0	1.658	.165
Total	10.12	407	100.000	$656.44	100.000	$1.367	$0.134
Foremen	10	6	100	$12.97	100	$2.161	$0.216

Table B—Showing number of persons, male and female, and total number and proportion in each class of employes, classified by weekly earnings received, together with the average wage per day received in each class and the total number of persons employed by month and the range of employment for *all* establishments reporting either as to wages and employes, in detail or classified weekly earnings.

CLASSIFICATION OF WEEKLY EARNINGS.					AVERAGE WAGES PER DAY.			NO. PERSONS EMP. BY MONTH.		
Classification.	No. of Persons. Male	No. of Persons. Female.	No. of Persons. Total	Per cent	Male.	Female.	Total	Month.	No.	Range.
Under $5 00..	19	......	19	3.57	$.668	......	$.668	Jan...	87	17.61
$ 5 00 but under 6 00..	4	......	4	.75	.900	......	.900	Feb...	60	12.15
6 00 but under 7 00..	18	......	18	3.38	1.080	....	1.080	Mar ..	149	30.16
7 00 but under 8 00..	7	......	7	1.32	1.250	......	1.250	April..	270	54.66
8 00 but under 9 00..	2	....	2	.38	1.350	......	1.350	May ..	347	70.24
9 00 but under 10 00	314	......	314	64.66	1.585	......	1.585	June..	405	81.98
10 00 but under 12 00	93	......	93	17.48	1.813	......	1.813	July..	473	95.75
12 00 but under 15 00..	35	....	35	6.58	2.148	......	2.148	Aug...	494	100.00
15 00 but under 20 00..	8	....	8	1.50	2.650	......	2,650	Sept..	447	90.49
20 00 and over	2	......	2	.38	5.000	......	5.000	Oct...	389	78.74
								Nov...	238	48.18
Total...............	532	......	532	100.00	$1.621	......	$1.621	Dec...	108	21.86
								Ave.	289	5.850

BROOMS AND BRUSHES—8 ESTABLISHMENTS.

Table A—Showing by occupation classes, hours of work per day, number and proportion of persons employed, total wages and proportion of wages paid and average wages per day and per hour in each occupation for that portion of the industry reporting employes in detail.

OCCUPATION.	Average hours per day.	PERSONS. Number.	PERSONS. Per cent.	WAGES. Total per day.	WAGES. Per cent.	WAGES. Average. Per day.	WAGES. Average. Per hour.
Borers	9.33	3	4.78	$7.00	7.246	$2.333	$0.250
Bristle mixers	9.33	2	3.17	4.00	4.141	2.00	.214
Broom makers	9.85	14	22.22	25.40	26.294	1.814	.184
Carpenter	9.33	1	1.59	2.80	2.899	2.80	.300
Cementer	9.33	1	1.59	2.00	2.070	2.00	.214
Draw hands	9.33	4	6.35	7.00	7.248	1.75	.187
Finishers	9.33	2	3.17	3.25	3.364	1.625	.174
Graders	10	1	1.59	.90	.932	.90	.090
Helpers	9.54	16	25.40	15.10	15.631	.94	.097
Machinists	9.33	2	3.17	5.75	5.952	2.875	.308
Set hands	9.33	4	6.35	8.50	8.799	2.125	.227
Sewers	9.50	2	3.17	2.50	2.588	1.25	.131
Sorters	10	2	3.17	1.40	1.449	.70	.070
Testers	9.33	3	4.78	4.50	4.658	1.50	.160
Trimmers	9.33	2	3.17	2.00	2.070	1.00	.107
Winders	10	2	3.17	4.00	4.141	2.00	.200
Zisers	4	2	3.17	.50	.518	.25	.062
Total	9.39	63	100.00	$96.60	100.00	$1.533	$0.163
Bookkeeper	10	1	20.00	$1.00	10.363	$1.00	$0.100
Manager	10	1	20.00	2.00	20.725	2.00	.200
Salesmen	10	2	40.00	4.00	41.451	2.00	.200
Shipping clerk	9.33	1	20.00	2.65	27.461	2.65	.284
Total	9.86	5	100.00	$9.65	100.00	$1.93	$0.195

Table B—Showing number of persons, male and female, and total number and proportion in each class of employes, classified by weekly earnings received, together with the average wage per day received in each class and the total number of persons employed by month and the range of employment for *all* establishments reporting either as to wages and employes, in detail, or classified weekly earnings.

Classification of Weekly Earnings.					Average Wages Per Day.			No. Persons Emp. by Month.		
Classification.	No. of Persons.			Per cent.						
	Male.	Female.	Total		Male.	Female.	Total	Month.	No.	Range.
Under $5 00..	62	......	62	51.23	.615	......	.615	Jan ..	129	100.00
$ 5 00 but under 6 00..	5	......	5	4.13	.900	......	.900	Feb .	123	95.35
6 00 but under 7 00..	6	......	6	4.96	1.000	..	1 000	Mar ..	126	97.67
7 00 but under 8 00..	5	......	5	4.13	1.250	......	1.250	April..	120	93.02
8 00 but under 9 00	......	......	......	....	....	......	....	May ..	112	86.82
9 00 but under 10 00	9	......	9	7.44	1.500	......	1.500	June .	102	79.07
10 00 but under 12 00..	17	......	17	14.05	1.847	.....	1.847	July ..	104	80.62
12 00 but under 15 00..	10	......	10	8.27	2.050	.....	2.050	Aug...	110	85.27
15 00 but under 20 00..	7	......	7	5.79	2.778	.....	2.778	Sept..	106	82.17
20 00 and over	......	..	......	. . ..	......	......	......	Oct...	103	79 89
								Nov ..	112	86.82
Total...............	121	......	121	100.00	$1.562	.. .	$1.562	Dec ..	116	89.92
								Ave...	114	88.36

CHAIRS—9 ESTABLISHMENTS.

Table A—Showing by occupation classes, hours of work per day, number and proportion of persons employed, total wages and proportion of wages paid and average wages per day and per hour in each occupation for that portion of the industry reporting employes in detail.

Occupation.	Average hours per day.	Persons.		Wages.			
		Number.	Per cent	Total per day.	Per cent.	Average.	
						Per day.	Per hour.
Bench hands	10	65	6.53	$91.30	7.28	$1.404	$0.140
Bending workers	10	9	.90	11.45	.91	1.272	.127
Borers	10	11	1.11	12.90	1.03	1.172	.117
Dippers	10	9	.90	10.65	.85	1.183	.118
Dowellers	10	3	.30	4.30	.34	1.433	.143
Engineers	10	1	.10	1.88	.15	1.88	.188
Facers	10	4	.40	4.90	.39	1.225	.122
Feeders	10	3	.30	3.30	.26	1.10	.110
Firemen	11	3	.30	4.20	.34	1.40	.127
Grinders	10	4	.40	7.15	.57	1.787	.178
Hand shading	10	12	1.21	13.10	1.04	1.091	.109
Helpers	10	86	8.64	77.20	6.15	.897	.089
Laborers	10	113	11.36	139.60	1.13	1.234	.123
Machine hands	10	87	8.74	128.78	10.26	1.480	.148
Machine helpers	10	11	1.11	13.27	1.06	1.206	.120
Machine sanders	10	48	4.82	62.02	4.94	1.292	.129
Painters	10	117	11.76	162.47	12.95	1.388	.138
Placing pearl, female.....	10	1	.10	1.00	.08	1.000	.100
Planers	10	8	.81	6.25	.50	.781	.078
Polishers	10	28	2.82	33.70	2.69	1.203	.120
Roustabouts	10	5	.50	6.10	.49	1.220	.122
Rubbers	10	35	3.52	36.90	2.94	1.054	.105
Sawyers	10	28	2.81	49.00	3.91	1.750	.175
Scrapers	10	10	1.01	12.65	1.01	1.265	.176
Seat makers	10	2	.20	3.50	.28	3.500	.350
Shapers	10	5	.50	6.90	.55	1.380	.138
Spindel sand'g & makers	10	5	.50	3.31	.26	.662	.066
Sweepers	10	1	.10	.50	.04	.500	.050
Tallymen	10	1	.10	1.50	.12	1.500	.150
Teamsters	11	3	.30	4.98	.40	1.660	.150

CHAIRS—9 ESTABLISHMENTS.—Continued.

Occupation.	Average hours per day.	Persons.		Wages.			
		Number.	Per cent	Total per day.	Per cent.	Average.	
						Per day.	Per hour.
Turners	10	48	4.83	81.35	6.47	1.692	.169
Upholsterers	10	8	.81	10.98	.87	1.372	.137
Upholsterers, female	10	1	.10	.50	.04	.500	.050
Varnishers	10	32	3.22	40.20	3.20	1.256	.125
Varnishers, female	10	13	1.31	9.85	.78	.757	.075
Warehouse men	10	5	.50	5.75	.46	1.150	.115
Watchmen	12.25	4	.40	5.67	.45	1.417	.115
Wheelbarrow men	10	2	.20	2.45	.20	1.225	.122
Wipers	10	16	1.61	17.45	1.39	1.090	.109
Wood workers	10	79	7.94	113.10	9.01	1.431	.143
Wrappers, female	10	40	4.02	22.41	1.79	.560	.056
Wrappers, male	10	22	2.21	16.82	1.34	.764	.076
Yard hands	10	7	.70	13.60	1.08	1.942	.194
Total and average	10.01	995	100.00	$1,254.89	100.00	$1.261	$0.125
Male	10.01	940	94.47	$1,221.13	97.319	$1.299	$0.129
Female	10	55	5.53	33.76	2.681	.614	.061
Foremen	10	36	76.59	$87.41	87.10	$2.428	$0.242
Shipping clerks	10	11	23.41	12.95	12.90	1.177	.117
Total	10	47	100.00	$100.36	100.00	$2.135	.213

Table B—Showing number of persons, male and female, and total number and proportion in each class of employes, classified by weekly earnings received, together with the average wage per day received in each class and the total number of persons employed by months and the range of employment for *all* establishments reporting either as to wages and employes, in detail, or classified weekly earnings

Classification of Weekly Earnings.					Average Wages Per Day.			No Persons Emp. by Month.		
Classification.	No. of Persons.			Per cent.						
	Male.	Female.	Total		Male.	Female.	Total	Month.	No.	Range.
Under $ 5 00	147	102	249	10.43	$.688	$.539	$.635	Jan	3,367	98.94
$ 5 00 but under 6 00	53	41	94	3.94	.896	.900	.897	Feb	3,267	96.00
6 00 but under 7 00	285	12	297	12.45	1.089	1.000	1.087	Mar	3,334	97.97
7 00 but under 8 00	712	2	714	29.94	1.244	1.25	1.244	Apr.	3,280	96.38
8 00 but under 9 00	521	..	521	21.85	1.381	..	1.381	May	3,204	94.15
9 00 but under 10 00	199	1	200	8.39	1.53	1.50	1.53	June	3,123	91.77
10 00 but under 12 00	139	......	139	5.83	1.797	......	1.797	July	3,193	93.83
12 00 but under 15 00	111	......	111	4.65	2.082	......	2.082	Aug.	3,218	94.56
15 00 but under 20 00	51	......	51	2.14	2.687	.....	2.687	Sept	3,256	95.68
20 00 and over	9	......	9	.38	4.48	.....	4.48	Oct.	3,341	98.18
								Nov.	3,403	100.00
Total	2,227	158	2,385	100.00	$1.339	$.614	$1.30	Dec.	3,038	89.27
								Ave.	3,252	95.57

CIGARS—56 ESTABLISHMENTS.

Table A—Showing by occupation, classes, hours of work per day, number and proportion of persons employed, total wages and proportion of wages paid and average wages per day and per hour in each occupation for that portion of the industry reporting employes in detail.

OCCUPATION	Average hours per day.	PERSONS.		WAGES.			
		Number.	Per cent.	Total per day.	Per cent.	Average.	
						Per day.	Per hour.
Apprentices	8.25	35	4.12	$20.01	1.58	$0.575	$0.069
Apprentices, female	8.25	8	.94	4.25	.34	.531	.064
Bunch makers, female....	8.42	40	4.71	33.50	2.65	.837	.099
Cigar makers	8.28	465	54.71	998.07	78.97	2.146	.259
Cigar makers, female.....	8.45	29	3.41	43.87	3.47	1.512	.178
Helpers	8.44	25	2.94	13.05	1.03	.522	.061
Helpers, female	8	7	.82	4.90	.39	.700	.087
Packer	8	1	.12	1.50	.12	1.500	.187
Packers, female	8.31	19	2.23	19.11	1.51	1.006	.121
Rollers	8.06	5	.59	3.25	.26	.650	.081
Rollers, female	8.38	26	3.06	17.45	1.38	.671	.080
Strippers	8.47	67	7.88	39.10	3.10	.583	.068
Strippers, female	8.31	123	14.47	65.75	5.20	.534	.064
Total and average..	8.32	850	100.00	$1,263.91	$100.00	1.487	$0.178
Male	8.26	598	70.35	$1,075.08	85.06	$1.798	$0.218
Female	8.34	252	29.65	188.83	14.94	.749	.089
Bookkeeper, female	6	1	16.67	$1.00	5.64	$1.000	$0.163
Clerk	10	1	16.67	2.00	11.27	2.000	.200
Foremen	8.50	4	66.66	14.74	83.09	3.687	.434
Total and average..	8.33	6	100.00	$17.74	$100.00	$2.956	$0.354
Male	8.80	5	83.33	$16.74	94.36	$3.348	$0.380
Female	6	1	16.67	1.00	5.64	1.000	.166

Table B—Showing number of persons, male and female, and total number and proportion in each class of employes, classified by weekly earnings received, together with the average wage per day received in each class and the total number of persons employed by months and the range of employment for *all* establishments reporting either as to wages and employes, in detail, or classified weekly earnings.

CLASSIFICATION OF WEEKLY EARNINGS.					AVERAGE WAGES PER DAY.			NO. PERSONS EMP. BY MONTH.		
Classification.	No. of Persons.			Per cent.						
	Male	Female.	Total		Male	Female.	Total	Month.	No.	Range.
Under $5 00..	130	158	288	33.65	$.533	$.502	$ 517	Jan...	787	95.28
$ 5 00 but under 6 00..	4	14	18	2.10	.883	.902	.899	Feb ..	799	96.73
6 00 but under 7 00..	20	43	63	7.36	1.051	1.000	1.016	Mar ..	815	98.67
7 00 but under 8 00	9	13	22	2.57	1.225	1.231	1.229	April..	811	98.18
8 00 but under 9 00..	7	1	8	.93	1.350	1.370	1.352	May. .	823	99.64
9 00 but under 10 00 .	64	20	84	9.81	1.530	1.515	1.526	June..	813	98.43
10 00 but under 12 00 .	35	3	38	4.44	1.749	1.733	1.748	July	826	100.00
12 00 but under 15 00	173	1	174	20.33	2.109	2.000	2.108	Aug ..	825	99.87
15 00 but under 20 00..	145	....	145	16.94	2.721	....	2.721	Sept..	822	99.52
20 00 and over	16	...	16	1.87	3.646	...	3.646	Oct.	810	98.06
								Nov .	818	99.03
Total........	603	253	856	100.00	$1 810	$.750	$1.497	Dec...	801	96.97
								Ave...	813	98.43

CLOTHING—18 ESTABLISHMENTS.

Table A—Showing by occupation, classes, hours of work per day, number and proportion of persons employed, total wages and proportion of wages paid and average wages per day and per hour in each occupation for that portion of the industry reporting employes in detail.

OCCUPATION.	Average hours per day.	PERSONS.		WAGES.			
		Number.	Per cent.	Total per day.	Per cent.	Average.	
						Per day.	Per hour.
Bushelmen	10	5	.56	$9.85	.962	$1.970	$0.197
Cutters	10	28	3.15	53.07	5.182	1.895	.189
Finishers	10	18	2.02	14.94	1.459	.830	.083
Fitters	10	1	.11	1.67	.163	1.670	.167
Helpers	10	21	2.36	23.36	2.281	1.112	.111
Helpers, female	9.98	327	36.74	305.52	29.835	.934	.093
Machinists	10	10	1.12	26.00	2.539	2.600	.260
Operators	10	57	6.41	80.93	7.903	1.419	.141
Piece workers	10	3	.34	5.40	.527	1.800	.180
Piece workers, female	10	4	.45	4.00	.390	1.000	.100
Pressers	10	5	.56	12.50	1.225	2.500	.250
Seamstresses, female	9.50	79	8.88	65.50	6.396	.829	.087
Sewers	9	84	9.44	143.04	13.968	1.702	.188
Sewers, female	9	12	1.35	10.86	1.060	.905	.100
Sewing girls, female	9	81	9.10	47.74	4.662	.589	.065
Stitchers, female	9	86	9.66	125.00	12.216	1.290	.143
Tailors	10	18	2.02	39.18	3.826	2.176	.217
Tailors' helpers	10	28	3.15	30.66	2.994	1.095	.109
Tailors, female	10	19	2.14	18.16	1.763	.955	.095
Teamsters	10	1	.11	2.00	.195	2.000	.200
Trimmers	10	2	.22	2.50	.244	.125	.012
Watchmen	10	1	.11	2.15	.210	2.150	.215
Total and average	9.65	890	100.00	$1,024.03	100.000	$1.151	$0.119
Male	9.70	282	31.69	$447.25	43.675	$1.586	$0.163
Female	9.63	608	68.31	576.78	56.325	.948	.098
Designer	10	1	9.09	$4.00	15.234	$4.000	$0.400
Examiners	10	2	18.18	5.50	20.944	2.750	.275
Examiner, female	9.50	5	45.46	6.17	23.495	1.234	.129
Foremen	10	2	18.18	9.17	34.920	4.585	.458
Forewoman	9.50	1	9.09	1.42	5.407	1.420	.149
Total and average	9.73	11	100.00	$26.26	100.000	$2.387	.245
Male	10	5	45.45	$18.67	71.097	$3.734	$0.373
Female	9.50	6	54.55	7.59	28.903	1.265	.133

Table B—Showing number of persons, male and female, and total number and proportion in each class of employes, classified by weekly earnings received, together with the average wage per day received in each class and the total number of persons employed by month and the range of employment for *all* establishments reporting either as to wages and employes, in detail, or classified weekly earnings.

CLASSIFICATION OF WEEKLY EARNINGS.					AVERAGE WAGES PER DAY			NO. PERSONS EMP. BY MONTH.		
Classification.	No. of Persons			Per cent.						
	Male	Female.	Total		Male	Female.	Total	Month	No.	Range.
Under $5 00	69	488	557	35.64	$.733	$.687	$.695	Jan	1,952	92.46
$ 5 00 but under 6 00	23	80	103	6.59	.920	.918	.918	Feb	1,996	94.55
6 00 but under 7 00	35	257	292	18.68	1.031	1.011	1.013	Mar	1,994	94.46
7 00 but under 8 00	36	62	98	6.27	1.319	1.252	1.284	April	1,986	94.08
8 00 but under 9 00	22	88	110	7.04	1.437	1.420	1.435	May	2,017	95.54
9 00 but under 10 00	47	80	127	8.12	1.543	1.500	1.515	June	2,003	94.88
10 00 but under 12 00	60	27	87	5.57	1.758	1.756	1.757	July	2,111	100.00
12 00 but under 15 00	63	17	80	5.12	2.114	2.000	2.102	Augt	2,052	97.23
15 00 but under 20 00	65	3	68	4.35	2.773	2.500	2.773	Sept	2,074	98.25
20 00 and over	41	......	41	2.62	4.312	.....	4.312	Oct	2,064	97.77
								Nov	2,038	96.54
Total	461	1,102	1,563	100.00	$1.623	$.952	$1.165	Dec	2,018	95.55
								Ave	2,025	95.92

COOPERAGE—12 ESTABLISHMENTS.

Table A—Showing by occupation, classes, hours of work per day, number and proportion of persons employed, total wages and proportion of wages paid and average wages per day and per hour in each occupation for that portion of the industry reporting employes in detail.

Occupation.	Average hours per day.	Persons.		Wages.			
		Number.	Per cent.	Total per day.	Per cent	Average.	
						Per day.	Per hour.
Boys	8	13	3.25	$13.00	1.61	$1.00	$0.125
Coopers	8.42	184	46.00	479.59	59.51	2.606	.309
Laborers	9.77	187	46.75	283.35	35.16	1.515	.155
Machinists	10	6	1.50	15.00	1.86	2.50	.250
Yardmen	10	10	2.50	15.00	1.86	1.50	.150
Total male	9.105	400	100.00	$805.94	100.00	$2.015	$0.221
Foremen	10	8	100.00	$20.50	100.00	$2.562	$0.256

Table B—Showing number of persons, male and female, and total number and proportion in each class of employes, classified by weekly earnings received, together with the average wage per day received in each class and the total number of persons employed by month and the range of employment for *all* establishments reporting either as to wages and employes, in detail, or classified weekly earnings.

Classification of Weekly Earnings.					Average Wages Per Day.			No. Persons Emp. by Month.		
Classification.	No. of Persons.			Per cent.						
	Male	Female.	Total		Male	Female.	Total	Month.	No.	Range.
Under $5 00	8	......	8	1.96	$.806	......	$.806	Jan...	321	85.60
$ 5 00 but under 6 00	12	....	12	2.94	.890	....	.890	Feb .	312	83.20
6 00 but under 7 00	14	....	14	3.43	1.000	......	1.000	Mar ..	342	91.20
7 00 but under 8 00	42	....	42	10.29	1.260	... ..	1.260	April..	372	99.20
8 00 but under 9 00	6	....	6	1.47	1.420	......	1.420	May ..	373	99.47
9 00 but under 10 00	54	.....	54	13.24	1.500	... .	1.500	June..	364	97 07
10 00 but under 12 00	89	....	89	21 82	1.824	......	1.824	July..	364	97.07
12 00 but under 15 00	40	..	40	9.80	2.140	.	2.140	Aug ..	364	97.07
15 00 but under 20 00	120	....	120	29.41	2 657	......	2.657	Sept..	375	100.00
20 00 and over	23	....	23	5.64	3.739	.. .	3.739	Oct ..	317	84.53
								Nov ..	364	97.07
Total	408	.....	408	100.00	$2 025	.....	$2.025	Dec ..	358	95.47
								Ave...	352	93 87

COTTON AND LINEN—10 ESTABLISHMENTS.

Table A—Showing by occupation, classes, hours of work per day, number and proportion of persons employed, total wages and proportion of wages paid and average wages per day and per hour in each occupation for that portion of the industry reporting employes in detail.

Occupation.	Average hours per day	Persons.		Wages.			
		Number.	Per cent.	Total per day.	Per cent.	Average.	
						Per day.	Per hour.
Apprentices	10	2	.60	$2.75	$0.788	$1.375	$0.137
Awning hangers	10	8	2.41	15.50	4.444	1.937	.193
Blacksmith	10	1	.30	1.67	.478	1.670	.167
Bleachers, female	10	6	1.82	9.00	2.580	1.500	.150
Carders	10	8	2.41	12.00	3.441	1.500	.150
Cutter	10	1	.30	1.83	.525	1.830	.183
Draymen	10	2	.60	4.00	1.147	2.000	.200
Engineer	10	1	30	2.00	.573	2.000	.200
Fireman	10	1	30	1.50	.430	1.500	.150
Helpers	10	6	1.82	9.00	2.580	1.500	.150
Helpers, female	10	13	3.92	12.01	3.446	.923	.092
Laborers	11	44	13.25	49.77	14.269	1.131	.102
Laborers, female	11	111	33.43	97.30	27.896	.876	.079
Tappers	10	6	1.82	9.00	2.580	1.500	.150
Mach. operators, female.	10	11	3.31	11.16	3.200	1.014	.101
Machine tenders	10	3	90	4.00	1.147	1.333	.133
Mach. tenders, female	10	50	15.06	32.30	9.260	.646	.064
Machinist	10	1	.30	2.50	.717	2.500	.250
Mattress maker, female	10	1	.30	1.25	.358	1.25	.125
Mattress makers, female.	10	1	.30	1.25	.358	1.25	.125
Packer	10	2	.60	2.50	.717	1.25	.125
Sailmakers	10	10	3.01	25.50	7.311	2.55	.255
Sewing girls	10	13	3.92	9.75	2.795	.75	.075
Sluberers, female	10	4	1.20	4.00	1.147	1.00	.100
Speeders, female	10	4	1.20	4.00	1.147	1.00	.100
Spinners, female	10	20	6.02	20.00	5.734	1.00	.100
Watchman	12	1	.30	1.50	.430	1.50	.125
Total	10.45	332	100.00	$348.79	100.000	$1.05	$0.100
Male	10.46	99	29.82	$148.02	42.44	$1.495	$0.142
Female	10.47	233	70.18	$200.77	57.56	.862	.082
Forelady	10	4	44.44	$4.32	25.19	$1.08	$0.108
Foreman	10	4	44.44	11.83	68.98	2.957	.295
Shipping clerk	10	1	11.12	1.00	5.83	1.00	.100
Total	10	9	100.00	$17.15	100.00	$1.905	$0.190
Male	10	5	55.56	$12.83	74.81	$2.566	$0.256
Female	10	4	44.44	4.32	25.19	1.08	.108

Table B—Showing number of persons, male and female, and total number and proportion in each class of employes, classified by weekly earnings received, together with the average wage per day received in each class and the total number of persons employed by month and the range of employment for *all* establishments reporting either as to wages and employes, in detail, or classified weekly earnings.

CLASSIFICATION OF WEEKLY EARNINGS.					AVERAGE WAGES PER DAY.			NO. PERSONS EMP. BY MONTH.		
Classification.	No. of Persons			Per cent.						
	Male.	Female.	Total		Male.	Female.	Total	Month.	No.	Range.
Under $5 00	71	337	408	42.50	$.756	$.716	$.721	Jan ..	831	91.22
$ 5 00 but under 6 00..	12	81	93	9.69	.900	.900	.900	Feb ..	869	95.39
6 00 but under 7 00..	31	150	181	18.85	1.000	1.013	1.011	Mar ..	863	94.73
7 00 but under 8 00..	50	52	102	10.63	1.250	1.250	1.250	Apr ..	884	97.04
8 00 but under 9 00 .	24	9	33	3.44	1.350	1.340	1.347	May .	882	96 82
9 00 but under 10 00..	43	24	67	6.98	1.504	1.500	1.503	June .	911	100.00
10 00 but under 12 00..	18	4	22	2 29	1.740	1.670	1.727	July..	802	88.04
12 00 but under 15 00..	29	1	30	3.13	2.025	2.000	2 024	Aug ..	711	78.05
15 00 but under 20 00	22	......	22	2.28	2.658	......	2.658	Sept..	687	75.41
20 00 and over	2	......	2	.21	3.350	.. ..	3.350	Oct...	709	77.83
								Nov .	869	95 39
Total................	302	668	960	100.00	$1.358	$.880	$1.040	Dec ..	885	97.15
								Ave ..	825	90.56

CRACKERS AND CONFECTIONERY—14 ESTABLISHMENTS.

Table A—Showing by occupation classes, hours of work per day, number and proportion of persons employed, total wages and proportion of wages paid and average wages per day and per hour in each occupation for that portion of the industry reporting employes in detail.

OCCUPATION.	Average hours per day.	PERSONS.		WAGES.			
		Number.	Per cent.	Total per day.	Per cent.	Average.	
						Per day.	Per hour.
Bakers	10	97	7.277	$199.91	16.804	$2.060	$0.206
Bakers, helpers	10	60	4.500	69.28	5.821	1.154	.115
Bakers, helpers, female.	10	41	3.076	27.78	2.335	.677	.067
Candy makers	10	107	8.026	212.02	17.822	1.981	.198
Candy makers, female....	10	293	21.985	173.46	14.580	.591	.059
Candy maker, helpers ..	10	29	2.176	23.50	1.988	.810	.081
Candy makers, helpers, female	10	33	2.476	22.20	1.866	.672	.067
Candy packers	10	10	.749	6.20	.521	.620	.062
Candy packers, female..	10	363	27.232	237.04	19.925	.653	.065
Chocolate dipper	10	1	.075	2.50	.210	2.500	.250
Chocolate dippers, female	10	45	3.376	30.09	2.529	.668	.066
Cleaners, female	10	2	.150	1.66	.139	.830	.083
Cracker packers	10	2	.150	3.50	.294	1.750	.175
Cracker packers, female..	10	168	12.602	103.50	8.700	.616	.061
Craterers	10	2	.150	4.00	.336	2.000	.200
Engineer	10	1	.075	2.00	.168	2.000	.200
Helpers	10	23	1.724	19.15	1.608	.832	.083
Helpers, female	10	40	3.001	24.48	2.058	.612	.061
Machinist	10	1	.075	2.50	.210	2.500	.250
Teamsters	10	8	.600	16.75	1.408	2.093	.209
Watchmen	10	2	.150	4.32	.363	2.160	.216
Wrappers, female	6	5	.375	3.68	.309	.736	.122
Total	9.98	1,333	100.000	$1,189.52	100.000	$0.892	$0.089
Male	10	343	25.73	$565.63	47.635	$1.649	$0.164
Female	9.98	990	74.27	623.89	52.365	.630	.063
Foreman	10	1	4.545	$3.33	9.652	$3.33	$0.333
Shippers	10	21	95.455	31.17	90.348	1.480	.148
Total	10	22	100.000	$34.50	100.000	$1.568	$0.156

Table B—Showing number of persons, male and female, and total number and proportion in each class of employes, classified by weekly earnings received, together with the average wage per day received in each class and the total number of persons employed by months and the range of employment for *all* establishments reporting either as to wages and employes, in detail, or classified weekly earnings.

Classification of Weekly Earnings.					Average Wages per Day.			No. Persons Emp. by Month.		
Classification.	No. of Persons.			Per cent.						
	Male.	Female.	Total		Male.	Female.	Total	Month.	No.	Range.
Under $5 00..	52	924	976	72.03	$.649	$.606	$.608	Jan...	1,100	79.65
$ 5 00 but under 6 00..	17	28	45	3.32	.901	.884	8.889	Feb .	1,128	81.68
6 00 but under 7 00..	47	37	84	6.20	1.055	1.015	1.037	Mar ..	1,105	80.01
7 00 but under 8 00..	34	1	35	2 58	1.296	1.330	1.297	April..	1,077	77.99
8 00 but under 9 00..	6	......	6	.44	1.420	......	1.420	May ..	1,099	79.58
9 00 but under 10 00	32	......	32	2.36	1 567	......	1.567	June..	1,132	81.96
10 00 but under 12 00	30	......	30	2.22	1.728	......	1.728	July ..	1,145	82.91
12 00 but under 15 00	97	......	97	7.16	2.096	......	2.096	Aug ..	1,164	84.28
15 00 but under 20 00	44	......	44	3.25	2.721	......	2.721	Sept..	1,224	88.63
20 00 and over.........	6	......	6	.44	3.943	......	3.943	Oct...	1,327	96.09
								Nov ..	1,381	100.00
Total...............	565	990	1,355	100.00	$1.644	$.63	$.903	Dec ..	1,280	92.68
								Ave...	1,180	85.45

CREAMERIES—37 ESTABLISHMENTS.

Table A—Showing by occupation classes, hours of work per day, number and proportion of persons employed, total wages and proportion of wages paid and average wages per day and per hour in each occupation for that portion of the industry reporting employes in detail.

Occupation.	Average hours per day.	Persons.		Wages.			
		Number.	Per cent.	Total per day.	Per cent.	Average.	
						Per day.	Per hour.
Butter makers	9.50	40	22.22	$77.85	28.093	$1.946	$0.204
Butter makers, helpers ..	10.33	12	6.67	15.67	5.655	1.306	.126
Cream handlers	10	2	1.11	4.00	1.444	2.00	.200
Laborers	9.96	108	60.00	152.50	55.032	1.412	.141
Skimmers	9.53	17	9.44	25.30	9.130	1.488	.155
Station operator	10	1	.56	1.80	.646	1.80	.180
Total	9.84	180	100.00	$277.12	100.000	$1.539	$0.156
Bookkeepers	10	3	23.08	$3.00	21.053	$1.00	$0.100
Bookkeepers, female	9.79	9	69.23	9.00	63.158	1.00	.102
Manager	10	1	7.69	2.25	15.789	2.25	.225
Total	9.85	13	100.00	$14.25	100.000	$1.096	$0.111
Male	10	4	30.77	$5.25	36.842	$1.312	$0.131
Female	9.79	9	69.23	9.00	63.158	1.00	.102

Table B—Showing number of persons, male and female, and total number and proportion in each class of employes, classified by weekly earnings received, together with the average wage per day received in each class and the total number of persons employed by months and the range of employment for *all* establishments reporting either as to wages and employes, in detail, or classified weekly earnings.

CLASSIFICATION OF WEEKLY EARNINGS.					AVERAGE WAGES PER DAY.			NO. PERSONS EMP. BY MONTH.		
Classification.	No. of Persons.			Per cent.						
	Male.	Female.	Total		Male.	Female	Total	Month.	No.	Range.
Under $5 00	7	....	7	3.63	$.675	.....	$.675	Jan...	171	83.01
$ 5 00 but under 6 00	...	....	.....	....	.. ..	.....	...	Feb...	172	83.50
6 00 but under 7 00..	9	9	18	9.33	1.017	$1.000	1.008	Mar..	175	84.95
7 00 but under 8 00 .	51	.....	51	26.43	1.250	.....	1.250	April.	186	90.29
8 00 but under 9 00..	3	......	3	1.56	1.343	......	1.343	May .	198	96 12
9 00 but under 10 00..	55	......	55	28.48	1.508	.....	1.508	June .	205	99.51
10 00 but under 12 00..	30	. ...	30	15.54	1.760	......	1.760	July..	206	100.00
12 00 but under 15 00	21	......	21	10.88	2.052	.. ..	2.052	Aug..	205	99.51
15 00 but under 20 00..	7	......	7	3.63	2.525	.. . .	2.525	Sept .	197	95.63
20 00 and over	1	...	1	.52	4.160	......	4 160	Oct...	195	94.66
								Nov	192	93 20
Total................	184	9	193	100.00	1.507	$1.000	$1.510	Dec ..	188	91.26
								Ave...	192	93.20

DYEING AND CLEANING—6 ESTABLISHMENTS.

Table A—Showing by occupation classes, hours of work per day, number and proportion of persons employed, total wages and proportion of wages paid and average wages per day and per hour in each occupation for that portion of the industry reporting employes in detail.

OCCUPATION.	Average hours per day.	PERSONS.		WAGES.			
		Number.	Per cent.	Total per day.	Per cent	Average.	
						Per day.	Per hour.
Cleaners	10	6	3.80	$10.50	6.037	$1.75	$0.175
Carpet layers	9.33	3	1.90	6.10	3.507	2.033	.217
Dyers	10	7	4.43	12.62	7.256	1.802	.180
Engineers	10	2	1.26	4.66	2.679	2.33	.233
Errand boys	10	3	1.90	1.74	1.001	.58	.058
Fireman	10	1	.63	1.67	.960	1.67	.167
Helpers	10	14	8.86	21.08	12.092	1.502	.150
Helpers, female	9.23	13	8.23	9.34	5.370	.718	.077
Ironer	8	1	.63	1.50	.862	1.50	.187
Laborers	10	8	5.06	11.36	6.532	1.42	.142
Porter	10	1	.63	1.75	1.006	1.75	.175
Pressers	10	3	1.90	4.67	2.685	1.556	.156
Pressers, female	9.23	77	48.73	63.80	36.684	.829	.089
Seamsters, female	8.8	5	3.17	4.42	2.542	.884	.100
Tailors	10	2	1.27	3.84	2.208	1.92	.192
Teamsters	9.66	12	7.60	14.92	8.579	1.243	.128
Total	9.60	158	100.00	$173.92	100.000	$1.10	$0.114
Male	9.87	63	39.87	$93.36	55.405	$1.482	$0.150
Female	9.31	95	60.13	77.56	44.595	.816	.087
Clerk	10	1	16.67	$1.00	20.00	$1.00	$0.100
Clerks, female	10.20	5	83.33	4.00	80.00	.80	.078
Total	10.16	6	100.00	$5.00	100.00	$0.833	$0.820
Male	10	1	16.667	$1.00	16.667	$1.00	$0.100
Female	10.20	5	83.333	4.00	83.333	.80	.078

Table B—Showing number of persons, male and female, and total number and proportion in each class of employes, classified by weekly earnings received, together with the average wage per day received in each class and the total number of persons employed by month and the range of employment for *all* establishments reporting either as to wages and employes, in detail, or classified weekly earnings.

CLASSIFICATION OF WEEKLY EARNINGS.					AVERAGE WAGES PER DAY.			NO. PERSONS EMP. BY MONTH.		
Classification.	No. of Persons.			Per cent.						
	Male.	Female.	Total		Male.	Female.	Total	Month.	No.	Range.
Under $5 00..	7	74	81	42.86	$.678	$.716	$.713	Jan ..	135	73.37
$ 5 00 but under 6 00..	2	22	24	12.70	.920	.913	.914	Feb...	135	73.37
6 00 but under 7 00..	9	10	19	10.06	1.000	1 023	1.012	Mar..	149	80.98
7 00 but under 8 00..	11	9	20	10.58	1.253	1.245	1.250	April..	166	90.22
8 00 but under 9 00..	2	.....	2	1.06	1.350	......	1.350	May ..	187	98 37
9 00 but under 10 00..	24	....	24	12.70	1.560	. ..	1.560	June .	187	98.37
10 00 but under 12 00 .	7	.....	7	3.70	1.718	......	1.718	July..	166	90.22
12 00 but under 15 00..	7	.....	7	3.70	2.070	......	2.070	Aug ..	168	91.30
15 00 but under 20 00..	5	.....	5	2.64	2.700	......	2.700	Sept.	175	95.11
20 00 and over.........	...	.....	...	.....	......	......	......	Oct...	184	100.00
								Nov...	183	99.41
Total..	74	115	189	100.00	$1.521	$.815	$1.091	Dec...	173	94.02
								Ave...	166	90.22

ELECTRIC & GAS SUPPLIES—17 ESTABLISHMENTS.

Table A—Showing by occupation, classes, hours of work per day, number and proportion of persons employed, total wages and proportion of wages paid and average wages per day and per hour in each occupation for that portion of the industry reporting employes in detail.

OCCUPATION.	Average hours per day.	PERSONS.		WAGES.			
		Number.	Per cent.	Total per day.	Per cent.	Average.	
						Per day.	Per hour.
Apprentices	8.41	12	1.858	$10.70	.969	$0.891	$0.105
Boys	9	2	.310	1.50	.136	.75	.083
Brass turners	10	4	.619	9.00	.815	2.25	.225
Carpenters	10	6	.929	12.00	1.114	2.05	.205
Core makers, female	10	18	2.786	15.80	1.431	.877	.087
Drain layers	9	6	.929	12.00	1.087	2.00	.222
Electricians	8	20	3,096	42.82	3.877	2.141	.267
Enamelers	8	13	2.012	22.75	2.060	1.75	.218
Engineers	11.33	3	.464	6.33	.573	2.11	.186
Firemen	11.33	6	.929	11.50	1.041	1.916	.169
Jobber	8	1	.155	2.50	.226	2.50	.312
Laborers	10.73	287	44.427	464.76	42.082	1.619	.150
Laborers, female	10.03	32	4.954	32.30	2.925	1.009	.100
Locksmiths	10	4	.619	9.66	.875	2.415	.241
Machine feeders	10	109	16.873	166.75	15.098	1.529	.152
Machinists	10	27	4.179	57.50	5.206	2.129	.212
Machinist, helpers	9.46	30	4.644	33.00	2.988	1.10	.116
Moulders	10	26	4.025	74.00	6.700	2.846	.284
Pattern makers	10	4	.619	7.25	.656	1.812	.181
Plater	10	1	.155	3.50	.317	3.50	.350
Plumbers	8.63	19	2.941	68.50	6.202	3.605	.417
Shovelers	10	10	1.548	22.50	2.037	2.25	.225
Steam fitters	9.20	5	.774	15.75	1.426	3.15	.341
Steam fitters, helper	10	1	.155	1.75	.159	1.75	.175
Total and average..	10.13	646	100.000	$1,104.42	100.000	$1.709	$0.168
Male	10.14	596	92.26	$1,056.32	95.645	$1.772	$0.174
Female	10.20	50	7.74	48.10	4.355	.962	.094
Bookkeeper, female	9	1	25.00	$1.50	14.634	$1.50	$0.166
Clerk	10	1	25.00	2.75	26.829	2.75	.275
Foremen	10.50	2	50.00	6.00	58.537	3.00	.285
Total and average..	10	4	100.00	$10.25	100.000	$2.562	$0.256
Male	10.33	3	75	$8.75	85.366	$2.917	$0.282
Female	9	1	25	1.50	14.634	1.50	.166

Table B—Showing number of persons, male and female, and total number and proportion in each class of employes, classified by weekly earnings received, together with the average wage per day received in each class and the total number of persons employed by month and the range of employment for *all* establishments reporting either as to wages and employes, in detail, or classified weekly earnings.

Classification of Weekly Earnings.					Average Wages Per Day			No Persons Emp. by Month.		
Classification.	No. of Persons.			Per cent.	Male	Female	Total	Month.	No.	Range.
	Male.	Female.	Total							
Under $5 00..	84	19	103	9.62	$.711	$.738	$.720	Jan..	953	89.48
$ 5 00 but under 6 00..	29	3	32	2.99	.900	.850	.883	Feb...	962	90.33
6 00 but under 7 00..	48	17	65	6.07	1.000	1.000	1.000	Mar ..	970	91.08
7 00 but under 8 00..	85	11	96	8.96	1 275	1.192	1.260	April..	958	89.95
8 00 but under 9 00 .	35	.....	35	3.27	1.350	.....	1.350	May .	922	86.57
9 00 but under 10 00	276	3	279	26.05	1.534	1.550	1.534	June..	953	89.48
10 00 but under 12 00..	146	...	146	13.63	1.780		1.780	July ..	1,026	96.34
12 00 but under 15 00	147	1	148	13.82	2.102	2.000	2 001	Aug..	1,034	97.09
15 00 but under 20 00.	128	.....	128	11.95	2.730	.....	2.730	Sept	1,055	99.06
20 00 and over........	39	......	39	3.64	3.654	.....	3.654	Oct.	1,065	100.00
								Nov...	1,043	97.93
Total..............	1,017	54	1,071	100.00	$1.778	$.955	$1.714	Dec ..	994	93.33
								Ave...	991	93.05

FLOUR AND FEED—73 ESTABLISHMENTS.

Table A—Showing by occupation, classes, hours of work per day, number and proportion of persons employed, total wages and proportion of wages paid and average wages per day and per hour in each occupation for that portion of the industry reporting employes in detail.

Occupation.	Average hours per day.	Persons.		Wages.			
		Number.	Per cent.	Total per day.	Per cent.	Average.	
						Per day.	Per hour.
Bolters	9	2	.24	$5.00	.332	$2.50	$0.277
Carpenters	10	14	1.70	34.25	2.271	2.446	.244
Coal passers	10	6	.73	9.50	.629	1.583	.158
Coopers	10	2	.24	4.00	.265	2.00	.200
Electrician	10	1	.12	3.00	.199	3.00	.300
Elevator men	10	37	4.51	63.45	4.208	1.715	.171
Engineers	10.40	27	3.29	56.95	3.776	2.11	.202
Firemen	10.28	14	1.70	24.05	1.595	1.718	.167
Grinders	9.11	9	1.09	19.38	1.285	2.153	.236
Laborers	9.95	117	14.25	183.41	12.161	1.567	.158
Loaders	10	112	13.64	212.57	14.096	1.898	.189
Machine tender	10.75	91	11.09	201.17	13.339	2.21	.205
Millers	10.08	86	10.49	199.85	13.252	2.32	.230
Millers, helpers	10	91	11.09	130.95	8.683	1.44	.144
Millwrights	10	15	1.83	39.25	2.602	2.617	.261
Millwright, helper	10	1	.12	1.67	.111	1.67	.167
Nailers	10	8	.98	7.55	.500	.944	.094
Oilers	10.17	23	2.79	38.73	2.569	1.684	.165
Packers	9.43	89	10.84	153.21	10.159	1.72	.182
Packers, helpers	10	4	.49	5.71	.379	1.43	.143
Purifier tenders	10	4	.49	7.36	.488	1.84	.184
Roller tenders	10	2	.24	5.00	.332	2.50	.250
Sweepers	9.57	19	2.32	27.64	1.833	1.455	.150
Teamsters	10.02	43	5.24	67.42	4.470	1.568	.156
Watchmen	11.32	3	.36	5.05	.333	1.683	.148
Weigher	10	1	.12	2.00	.133	2.00	.200
Total and average..	10.14	821	100.00	$1,508.12	100.00	$1.836	$0.181
Bookkeeper	11	5	20.83	$11.00	19.580	$2.20	$0.200
Foremen	10	11	45.83	28.43	50.605	2.584	.258
Salesmen	10	1	4.17	2.50	4.450	2.50	.250
Shippers	10	7	29.17	14.25	25.365	2.036	.203
Total and average..	10.20	24	100.00	$56.18	100.00	$2.34	$0.229

Table B—Showing number of persons, male and female, and total number and proportion in each class of employes, classified by weekly earnings received, together with the average wage per day received in each class and the total number of persons employed by month and the range of employment for *all* establishments reporting either as to wages and employes, in detail, or classified weekly earnings.

CLASSIFICATION OF WEEKLY EARNINGS.					AVERAGE WAGES PER DAY.			NO. PERSONS EMP. BY MONTH.		
Classification.	No. of Persons.			Per cent.						
	Male	Female.	Total		Male.	Female.	Total	Month.	No.	Range
Under $5 00	10	......	10	1.09	$.669	......	$.669	Jan	714	80.41
$ 5 00 but under 6 00	3	....	33	.33	.85	......	.85	Feb	711	80.07
6 00 but under 7 00	11	......	11	1.19	1.00	......	1.00	Mar	743	83.67
7 00 but under 8 00	53	......	53	5.75	1.25	......	1.25	April	747	84.12
8 00 but under 9 00	42	......	42	4.56	1.36	......	1.36	May	735	82.77
9 00 but under 10 00	245	......	245	26.60	1.53	....	1 53	June	720	81.08
10 00 but under 12 00	201	....	201	21.82	1.744	...	1.744	July	689	77.59
12 00 but under 15 00	273	......	273	29.64	2.102	....	2.102	Aug	677	76.24
15 00 but under 20 00	73	.....	73	7.93	2.64	......	2.64	Sept	737	82.99
20 00 and over	10	.....	10	1.09	4.446	......	4.446	Oct	888	100.00
								Nov	884	99.55
Total	921	......	921	100.00	$1.851	.....	$1.851	Dec	759	85.47
								Ave	750	84.46

FOOD PREPARATIONS—17 ESTABLIHSMENTS.

Table A—Showing by occupation, classes, hours of work per day, number and proportion of persons employed, total wages and proportion of wages paid and average wages per day and per hour in each occupation for that portion of the industry reporting employes in detail.

OCCUPATION.	Average hours per day.	PERSONS.		WAGES.			
		Number.	Per cent.	Total per day.	Per cent.	Average.	
						Per day.	Per hour.
Blanchers	10	3	.12	$4.50	.157	$1.50	$0.150
Blacksmiths	10	2	.08	3.75	.131	1.875	.187
Box men	10	4	.16	7.00	.243	1.75	.175
Box men, helpers	10	90	3.58	131.25	4.566	1.458	.145
Canners	10	2	.08	3.00	.104	1.50	.150
Carpenters	10	4	.16	10.00	.344	2.50	.250
Cappers	10	3	.12	3.00	.104	1.00	.100
Cappers, female	10	4	.16	4.00	.139	1.00	.100
Cookers	10	5	.20	7.50	.261	1.50	.150
Engineers	10	11	.44	28.75	1.000	2.614	.261
Field men	10	25	1.00	40.00	1.392	1.60	.160
Fillers	10	4	.16	6.00	.209	1.50	.150
Firemen	10	6	.24	10.75	.374	1.791	.179
Graders	10	2	.08	3.00	.104	1.50	.150
Helpers	10.44	339	13.52	520.50	18.106	1.535	.147
Helpers, female	10.17	274	10.93	215.00	7.479	.784	.768
Laborers	10	817	32.58	1,073.22	37.330	1.314	.131
Laborers, female	10	393	15.66	330.96	11.513	.842	.084
Machinists	10.60	10	.40	21.83	.759	2.183	.206
Machine tenders	10	10	.40	17.50	.609	1.75	.175
Millwrights	10	4	.16	9.25	.322	2.312	.231
Pickers	9	8	.32	8.00	.278	1.00	.111
Pickers, female	10	443	17.66	331.20	11.520	.747	.074
Press feeder	10	1	.04	1.50	.052	1.5	.150
Teamsters	10	12	.47	34.25	1.191	2.854	.285
Tippers	10	4	.16	7.00	.244	1.75	.175
Viners	10	18	.72	27.00	.939	1.50	.150
Watchmen	11.60	10	.40	15.25	.531	1.525	.131
Total and average	10.09	2,508	100.00	$2,874.96	100.000	$1.146	$0.113
Male	10.12	1,394	55.58	$1,993.80	63.505	$1.43	$0.141
Female	10.03	1,114	44.42	881.16	36.495	.791	.078
Bookkeeper	9	1	5.00	$2.00	4.95	$2.00	$0.222
Foremen	9.31	19	95.00	38.42	95.05	2.022	.217
Total and average	9.3	20	100.00	$40.42	100.00	$2.021	$0.217

Table B—Showing number of persons, male and female, and total number and proportion in each class of employes, classified by weekly earnings received, together with the average wage per day received in each class and the total number of persons employed by month and the range of employment for *all* establishments reporting either as to wages and employes, in detail, or classified weekly earnings.

CLASSIFICATION OF WEEKLY EARNINGS.					AVERAGE WAGES PER DAY.			NO PERSONS EMP. BY MONTH.		
Classification.	No. of Persons.			Per cent						
	Male.	Female.	Total		Male.	Female.	Total	Month.	No.	Range.
Under $5 00..	156	906	1,062	42.01	$.726	$.732	$.731	Jan...	479	19.84
$ 5 00 but under 6 00	.....	......	....	......	.....	....	....	Feb ..	355	14.71
6 00 but under 7 00..	101	175	276	10.92	1.015	1.000	1.005	Mar ..	374	15 49
7 00 but under 8 00	147	23	170	6.72	1 253	1.198	1 246	April .	445	18.43
8 00 but under 9 00 .	.....	......	......	.....	......	......	.. ...	May .	492	20.38
9 00 but under 10 00..	684	10	694	27.45	1 500	1.500	1.500	June..	728	30.12
10 00 but under 12 00..	265	.....	265	10.48	1.740	.....	1.740	July..	2,414	100.00
12 00 but under 15 00.	33	......	33	1.31	2.060	......	2.060	Aug ..	2,097	86.87
15 00 but under 20 00..	27	.. ...	27	1.07	2.796	......	2.796	Sept.	1.006	41.47
20 00 and over.	1	......	1	.04	3.500	....	3.500	Oct ..	663	27.46
								Nov ..	482	19.97
Total	1,414	1,114	2,528	100.00	$1.437	$.791	$1.201	Dec ..	413	17.11
								Ave...	829	34.34

FURNITURE—35 ESTABLISHMENTS.

Table A—Showing by occupation, classes, hours of work per day, number and proportion of persons employed, total wages and proportion of wages paid and average wages per day and per hour in each occupation for that portion of the industry reporting employes in detail.

OCCUPATION.	Average hours per day.	PERSONS.		WAGES.			
		Number.	Per cent.	Total per day.	Per cent.	Average.	
						Per day.	Per hour.
Bed makers	10	24	1.0753	$41.20	1.2554	$1.716	$0.171
Bed makers, helpers	10	15	.6720	11.85	.3613	.79	.079
Blacksmiths	10	2	.0896	3.26	.0994	1.63	.163
Band sawyer	10	1	.0448	2.00	.0610	2.00	.200
Carvers	10	16	.7169	42.80	1.3048	2.675	.267
Carvers, helpers	10	12	.5381	14.91	.4548	1.262	.126
Cabinet makers	10	239	10.7079	488.89	14.9[illegible]46	2.045	.204
Cabinet makers, apprentices	10	37	1.6577	41.40	1.2622	1.118	.111
Cutters	10	2	.0896	4.85	.1473	2.415	.241
Engineers	10	11	.4928	26.40	.8049	2.4	.240
Firemen	10	6	.2688	10.70	.3262	1.783	.178
Fillers	10	17	.7616	21.13	.6442	1.242	.124
Fillers' Helper	10	1	.0448	.85	.0229	.85	.085
Finishers	10	251	11.2455	416.27	12.6917	1.658	.165
Finishers' helpers	10	95	4,3011	77.90	2.3749	.82	.082
Finishers' helper, female.	10	1	.0448	.75	.0229	.75	.075
Gluers	10	18	.8064	24.85	.7576	1.38	.138
Helpers, female	10	3	.1344	3.58	.1092	1.193	.119
Laborers	10	390	17.4288	508.61	15.5068	1.304	.130
Laborers, female	10	20	.8961	10.45	.3186	.522	.052
Laborers, boys	10	43	1.9265	26.95	.8218	.626	.062
Lumber scaler	10	1	.0448	1.60	.0488	1.60	.160
Mattress makers	10	4	.1792	6.50	.1982	1.625	1.62
Machine hands	10	438	19.6232	697.13	21.2542	1.591	.159
Machine helpers	10	184	8.2437	188.23	5.7385	1.012	.101
Machine tenders	10	37	1.6577	42.81	1.3051	1.157	.115
Machinists	10	30	1.3441	58.94	1.7968	1.964	.196
Packers	10	68	3.0465	88.38	2.6944	1.299	.129
Painter boys	10	5	.2240	4.50	.1219	.90	.080
Polishers	10	13	.5824	18.25	.5564	1.403	.140
Saw filer	10	1	.0448	2.00	.0610	2.00	.200

FURNITURE—35 ESTABLISHMENTS—Continued.

OCCUPATION.	Average hours per day.	PERSONS.		WAGES.			
		Number.	Per cent.	Total per day	Per cent.	Average.	
						Per day.	Per hour.
Seamstresses	9.75	33	1.4785	33.97	1.0356	1.029	.105
Spring maker	10	1	.0448	1.66	.0506	1.66	.166
Sanders	10	6	.2688	7.20	.2194	1.2	.120
Teamsters	10	8	.3583	14.25	.4344	1.781	.178
Tinsmith	10	1	.0448	1.75	.0533	1.75	.175
Upholsterers	10	103	4.6147	201.46	6.1418	1.955	.195
Upholsterers' helper	10	5	.2240	4.25	.1299	.85	.085
Upholst's' helper, female	10	1	.0448	.83	.0253	.83	.083
Varnishers	10	22	.9856	35.30	1.0762	1.604	.160
Veneerers	10	35	1.5681	43.50	1.3262	1.242	.124
Watchmen	11.10	20	.8961	29.03	.8850	1.451	.130
Wood workers	10	10	.4480	17.50	.5335	1.75	.175
Weaving helpers, female	10	2	.0896	2.00	.0610	1.00	.100
Total and average	10.006	2,232	100.00	$3,280.12	100.00	$1.47	$0.146
Male	10.01	2,172	97.311	$3,228.54	98.943	$1.493	.149
Female	9.86	60	2.689	51.58	1.057	.860	.087
Foremen	10	23	53.488	$62.20	66.432	$27.04	$0.270
Forelady	10	1	2.326	1.50	1.602	1.50	.150
Shipping clerks	10	18	41.860	27.68	29.563	1.537	.153
Timekeeper	10	1	2.326	2.25	2.403	2.25	.225
Total and average	10	43	100.00	$93.63	100.00	$2.177	$ .217
Male	10	42	97.67	$92.13	98.398	$2.193	$0.219
Female	10	1	2.33	1.50	1.602	1.50	.150

Table B—Showing number of persons, male and female, and total number and proportion in each class of employes, classified by weekly earnings received, together with the average wage per day received in each class and the total number of persons employed by month and the range of employment for *all* establishments reporting either as to wages and employes, in detail, or classified weekly earnings.

CLASSIFICATION OF WEEKLY EARNINGS					AVERAGE WAGES PER DAY.			NO. PERSONS EMP. BY MONTH.		
Classification.	No of Persons.			Per cent.						
	Male.	Female	Total		Male.	Female	Total	Month.	No.	Range.
Under $5 00	237	23	260	11.43	$.651	$.552	$.643	Jan.	2,336	91.10
$ 5 00 but under 6 00	69	8	77	3.39	.882	.85	.878	Feb	2,434	94.93
6 00 but under 7 00	156	20	176	7.73	1.061	1.015	1.056	Mar.	2,533	98.79
7 00 but under 8 00	415	8	423	18.60	1.253	1.218	1.253	April	2,569	100.00
8 00 but under 9 00	266	.....	266	11.69	1.379		1.379	May	2,510	97.89
9 00 but under 10 00	379	1	380	16.70	1.53	1.50	1.53	June	2,476	96 56
10 00 but under 12 00	214	......	214	9.41	1.762	.....	1.762	July	2,463	97.22
12 00 but under 15 00	334	1	335	14.72	2.093	2.00	2.093	Aug	2,532	98.74
15 00 but under 20 00	135	....	135	5.93	2.694	..	2.694	Sept.	2,455	95.74
20 00 and over.	9	.....	9	.40	3.537	.....	3.537	Oct	2,508	97.81
								Nov	2,475	96.52
Total	2,214	61	2,275	100.00	$1.50	$.87	$1.483	Dec.	2,488	97.07
								Ave.	2,484	96.87

FURS, GLOVES AND MITTENS—16 ESTABLISHMENTS.

Table A—Showing by occupation, classes, hours of work per day, number and proportion of persons employed, total wages and proportion of wages paid and average wages per day and per hour in each occupation for that portion of the industry reporting employes in detail.

OCCUPATION.	Average hours per day.	PERSONS.		WAGES.			
		Number.	Per cent.	Total per day.	Per cent.	Average.	
						Per day.	Per hour.
Beamster	10	1	.170	$1.25	.150	$1.25	$0.125
Boys	10	2	.330	1.17	.139	.585	.058
Cutters	9.90	108	17.640	182.72	24.848	1.691	.171
Dyer	10	1	.170	1.50	.184	1.50	.150
Engineer	10	1	.170	2.00	.249	2.00	.200
Glove makers, female	8	18	2.940	13.50	1.717	.75	.093
Hand workers, female	10	6	.980	4.18	.548	.696	.069
Helpers	9.93	40	6.530	32.95	4.464	.823	.082
Helpers, female	8	8	1.310	6.40	.849	.80	.100
Laborers	9.64	7	1.140	10.25	1.680	1.464	.151
Laborers, female	9.63	11	1.800	10.25	1.680	.931	.096
Layers off	10	21	3.430	27.35	2.682	1.304	.130
Machinists	9.88	9	1.470	16.25	2.201	1.805	.183
Machine operators	9.18	8	1.310	19.67	2.647	2.458	.268
Mach. operators, female	8.54	190	31.030	208.09	28.281	1.962	.228
Packers	9.87	4	.660	7.91	1.046	1.977	.200
Servers, female	9.79	139	22.700	146.44	19.910	1.053	.107
Shover	10	1	.170	3.00	.388	3.00	.300
Sorters, female	10	23	.170	23.00	3.110	1.00	.100
Tanners	10	3	.490	6.25	.831	2.083	.208
Trimmers, female	9.50	6	.980	4.05	.531	.675	.071
Trimmers	10	5	.820	6.50	.865	1.30	.130
Total and average	9.36	612	100.00	$734.68	100.000	$1.20	$0.128
Male	9.89	211	34.46	$318.77	43.39	$1.51	$0.152
Female	9.09	401	65.54	415.91	56.61	1.037	.114
Clerks	9.66	3	.30	$6.50	32.09	$2.166	$0.225
Forelady	8	1	.10	1.00	29.63	1.00	.125
Foremen	8.5	2	.20	6.00	4.95	3.00	.352
Inspector	10	1	.10	3.00	14.82	3.00	.300
Stenographers, female	8	3	.30	3.75	18.51	1.25	.156
Total and average	8.80	10	100.00	$20.75	100.00	$2.075	$0.235
Male	9.33	6	.60	$15.50	76.54	$2.583	$0.276
Female	8	4	.40	4.75	23.46	1.187	.148

Table B—Showing number of persons, male and female, and total number and proportion in each class of employes, classified by weekly earnings received, together with the average wage per day received in each class and the total number of persons employed by month and the range of employment for *all* establishments reporting either as to wages and employes, in detail, or classified weekly earnings.

CLASSIFICATION OF WEEKLY EARNINGS.					AVERAGE WAGES PER DAY.			NO. PERSONS EMP. BY MONTH.		
Classification.	No. of Persons.			Per cent.						
	Male.	Female.	Total		Male.	Female.	Total	Month	No.	Range.
Under $5 00	54	256	310	33.9	$.74	$.705	$.712	Jan	778	80.37
$ 5 00 but under 6 00	5	37	42	4.7	.89	.890	.89	Feb	772	79.75
6 00 but under 7 00	30	106	136	14.9	1.00	1.020	1.016	Mar	826	85.33
7 00 but under 8 00	51	41	92	10 1	1.25	1.283	1.264	April	886	91.53
8 00 but under 9 00	8	19	27	3.1	1.40	1.400	1.400	May	968	100.00
9 00 but under 10 00	26	62	88	8.6	1.50	1.500	1.54	June	919	94.94
10 00 but under 12 00	45	27	72	7.9	1.73	1.710	1.72	July	918	94.83
12 00 but under 15 00	79	16	95	10.5	2.06	2.000	2.043	Aug	957	97.83
15 00 but under 20 00	33	4	37	4.2	2.53	2.500	2.522	Sept	887	91.63
20 and over	18	......	18	2.1	3.18	......	3.184	Oct	889	91.84
								Nov	840	86.78
Total	349	568	917	100.0	$1.54	$1.038	$1.213	Dec	753	77.79
								Ave.	866	89.46

IRON—31 ESTABLISHMENTS.

Table A—Showing by occupation, classes, hours of work per day, number and proportion of persons employed, total wages and proportion of wages paid and average wages per day and per hour in each occupation for that portion of the industry reporting employes in detail.

OCCUPATION.	Average hours per day.	PERSONS.		WAGES.			
		Number.	Per cent.	Total per day.	Per cent.	Average. Per day.	Average. Per hour.
Ashmen	12	8	.158	$15.20	.152	$1.90	$0.158
Assorter	10	1	.019	2.00	.020	2.00	.200
Assorters, female	10	5	.099	6.65	.067	1.33	.133
Bindermen	10	30	.594	52.50	.525	1.75	.175
Blacksmiths	10.03	67	1.322	159.50	1.593	2.38	.237
Blacksmith helpers	10.10	20	.396	35.55	.355	1.777	.175
Boiler makers	10	3	.059	8.70	.087	2.90	.290
Boiler maker helpers	10	7	.138	12.60	.126	1.80	.180
Boltmen	10	6	.118	12.00	.120	2.00	.200
Boiler washers	11	2	.039	3.93	.040	1.966	.178
Boys	10.06	315	6.243	272.74	2.725	.868	.086
Cagers	12	4	.079	8.00	.080	2.00	.166
Cartmen	10	5	.099	9.75	.098	1.95	.195
Carpenters	10	22	.436	51.75	.517	2.352	.235
Carpenters' helpers	10	4	.079	6.75	.068	1.687	.168
Catchers	10	2	.039	4.50	.045	2.25	.225
Chippers	11.50	8	.158	20.10	.201	2.512	.218
Chargers	12	2	.039	4.20	.042	2.10	.175
Cinder snappers	12	14	.277	28.20	.282	2.014	.167
Cleaner	10	1	.019	1.60	.016	1.60	.160
Coal handlers	11.43	64	1.268	119.61	1.194	1.869	.163
Core makers	10	90	1.783	124.15	1.240	1.379	.137
Counters	11	13	.257	24.31	.243	1.87	.170
Cranemen	12	4	.079	9.36	.094	2.34	.196
Crushermen	11.66	6	.118	11.35	.114	1.891	.162
Cupola tenders	10	4	.079	7.90	.079	1.975	.197
Driller	10	1	.019	1.87	.019	1.87	.187
Dryman	10	1	.019	1.60	.016	1.60	.160
Electricians	10.33	6	.118	12.70	.127	2.117	.204
Electrician, helpers	10	4	.079	6.80	.068	1.70	.170
Engineers	11.08	59	1.169	141.92	1.417	2.405	.217
Fillers	11.53	52	1.030	107.20	1.070	2.061	.179
Firemen	11.81	63	1.248	130.30	1.302	2.068	.175
Flask carrier	10	1	.019	1.65	.017	1.65	.165
Gas producers	12	26	.515	51.96	.519	1.998	.166
Grinders	11	11	.218	19.80	.198	1.80	.163
Handymen	10	65	1.288	113.65	1.135	1.748	.174
Heaters	11.40	22	.436	127.46	1.273	5.794	.508
Heaters, helpers	12	12	.237	25.80	.258	2.60	.216
Helpers	10.47	46	.911	73.54	.735	1.599	.152
Hoisters	10.50	8	.158	22.32	.223	2.79	.265
Hookers	10	2	.039	4.50	.045	2.25	.225
Hot sawmen	8	3	.059	10.26	.102	3.42	.427
Hot straighteners	10.77	49	.971	120.83	1.207	2.466	.228
Inspectors	10	3	.059	5.25	.053	1.75	.175
Iron carriers	10.56	39	.773	88.75	.886	2.275	.215
Japaners	10	7	.138	10.50	.105	1.50	.150
Keepers	12	8	.158	20.30	.203	2.537	.211
Keepers' helpers	12	22	.436	46.20	.462	2.10	.175
Knife changers	12	2	.039	4.40	.044	2.20	.183
Laborers	10.05	1,662	32.943	2,560.87	25.563	1.541	.153
Landers	10	14	.277	24.50	.245	1.75	.175
Loader	11	1	.019	2.70	.027	2.70	.245
Machinists	10	62	1.228	173.15	1.729	2.792	.279
Machinists' helpers	10	82	1.625	117.90	1.177	1.437	.143
Machine tenders	10	110	2.180	164.15	1.639	1.492	.149
Mason	10	1	.019	3.00	.030	3.00	.300
Metal polishers	10	15	.297	36.75	.367	2.45	.245
Millwrights	10	4	.079	11.46	.115	2.865	.286
Miners	10	114	2.259	245.10	2.447	2.15	.215
Monkey	10	1	.019	1.15	.012	1.15	.115
Morgan Train men	12	2	.039	6.20	.062	3.10	.253

IRON—Continued.

Occupation.	Average hours per day.	Persons.		Wages.			
						Average.	
		Number.	Per cent.	Total per day.	Per cent.	Per day.	Per hour.
Motormen	12	2	.039	3.90	.039	1.95	.162
Moulders	9.96	1,015	20.118	2,380.27	23.760	2.345	.235
Mounters	10	9	.178	20.45	.204	2.272	.227
Oilers	12	19	.376	39.55	.395	2.081	.173
Packers	10	7	.138	8.30	.083	1.185	.185
Packers, female	10	7	.138	7.00	.070	1.00	.100
Painters	10	7	.138	13.65	.137	1.95	.195
Pattern makers	10	37	.733	97.76	.976	2.642	.264
Pilers	11.20	68	1.347	134.60	1.344	1.979	.176
Platers	10	22	.436	40.15	.401	1.825	.182
Press hands	10	14	.277	21.17	.212	1.512	.151
Pump and pipemen	10.25	16	.317	31.48	.315	1.967	.181
Punchers	10.80	10	.198	17.70	.177	1.77	.163
Punch setters	12	2	.039	4.80	.048	2.40	.200
Rail breakers	10	6	.118	20.16	.202	3.36	.336
Range makers	10	2	.039	6.05	.061	3.205	.320
Roller hands	8.71	180	3.567	865.74	8.643	4.809	.552
Roll turners	10	23	.455	61.45	.614	2.672	.267
Roughers	10	16	.317	60.00	.600	3.75	.375
Sampler	10	1	.019	1.90	.019	1.90	.190
Sand cutters	10	2	.039	3.50	.035	1.75	.175
Scrappers	11	2	.039	3.70	.037	1.85	.168
Shearmen	11.44	25	.495	60.05	.600	2.402	.209
Shovelers	10	36	.713	172.80	1.725	4.80	.480
Skip tenders	10	8	.158	11.60	.116	1.45	.145
Spellers	10	2	.039	5.50	.055	2.75	.275
Spike machine tenders	10	7	.138	15.00	.150	2.143	.214
Stockmen	10	20	.396	35.00	.350	1.75	.175
Stove tenders	12	4	.079	8.30	.083	2.075	.172
Supply men	10	2	.039	3.00	.030	1.50	.150
Switchmen	11.20	5	.099	10.74	.108	2.148	.102
Teamsters	10.41	29	.713	54.16	.541	1.867	.179
Timbermen	10	20	.396	38.20	.382	1.91	.191
Trackman	10	1	.019	2.10	.021	2.10	.210
Trainmen	10	21	.416	39.32	.393	1.872	.187
Truckmen	10	6	.118	9.90	.099	1.650	.165
Turner	10	1	.019	2.10	.021	2.10	.210
Turners' helper	10	1	.019	1.25	.013	1.25	.125
Watchmen	11.60	25	.495	45.41	.454	1.816	.156
Water tenders	12	4	.079	10.05	.101	2.512	.209
Weighers	9.60	10	.198	20.10	.201	2.01	.209
White washers	12	2	.039	3.70	.037	1.85	.164
Wipers	12	4	.079	7.50	.075	1.875	.155
Wire workers	10	5	.099	10.05	.101	2.01	.201
Wire workers' helpers	10	3	.059	3.75	.038	1.25	.125
Yardmen	10.50	50	.991	91.50	.914	1.83	.174
Total and average	10.16	5,045	100.00	$10018.25	100.000	$1.986	$0.195
Male	10.16	5,033	99.77	$10004.60	99.864	$1.988	$0.195
Female	10	12	.23	13.65	.136	1.137	.113
Bookkeeper	10	1	1.52	03.25	2.05	$3.25	$0.325
Captains	10	2	3.03	7.50	4.72	3.75	.375
Foremen	10.25	31	46.97	75.39	47.40	2.432	.237
Office men	10	2	3.03	5.00	3.15	2.50	.250
Shipping clerks	10.20	20	30.30	35.45	22.25	1.522	.149
Telegraphers	10	10	15.15	32.50	20.43	3.250	.325
Total and average	10.18	66	100.00	$159.09	100.00	$2.41	$0.236

Table B—Showing number of persons, male and female, and total number and proportion in each class of employes, classified by weekly earnings received, together with the average wage per day received in each class and the total number of persons employed by month and the range of employment for *all* establishments reporting either as to wages and employes, in detail, or classified weekly earnings.

CLASSIFICATION OF WEEKLY EARNINGS.					AVERAGE WAGES PER DAY.			NO. PERSONS EMP. BY MONTH.		
Classification.	No. of Persons,			Per cent						
	Male	Female.	Total		Male	Female.	Total	Month	No.	Range.
Under $5 00.	197	......	197	3.37	$.712	......	$.712	Jan..	5,907	100.00
$ 5 00 but under 6 00..	268	....	268	4.59	.907	.....	.907	Feb...	5,793	98.19
6 00 but under 7 00..	143	7	150	2.57	1.063	$1.00	1.059	Mar	5,867	99.44
7 00 but under 8 00	145	5	150	2.57	1.257	1.33	1.258	April.	5,889	99.81
8 00 but under 9 00	75	......	75	1.29	1.387	......	1.387	May..	5,647	95.71
9 00 but under 10 00	1,731	......	1,731	29.62	1.553	......	1.553	June..	5,471	92.73
10 00 but under 12 00	869	......	869	14.85	1.805	......	1.805	July.	5,286	89.59
12 00 but under 15 00	1,413	......	1.413	24.18	2.256	.....	2.256	Aug..	5,515	93.47
15 00 but under 20 00.	721	......	721	12.34	2.772	......	2.772	Sept	5,571	94.42
20 00 and over.... ...	270	......	270	4 62	5.168	....	5.168	Oct...	5,620	95.25
								Nov..	5,299	89.81
Total....	5,832	12	5,844	100.00	$1.993	$1.137	$1.991	Dec...	4,850	82.20
								Ave...	5,559	94.39

KNIT GOODS—15 ESTABLISHMENTS.

Table A—Showing by occupation, classes, hours of work per day, number and proportion of persons employed, total wages and proportion of wages paid and average wages per day, and per hour in each occupation, for that portion of the industry reporting employes in detail.

OCCUPATION.	Average hours per day.	PERSONS.		WAGES.			
		Number.	Per cent.	Total per day.	Per cent.	Average.	
						Per day.	Per hour.
Boarders	10	3	.173	$4.75	.297	$1.583	$0.158
Carders	10	5	.288	3.35	.209	.67	.067
Cutters	10	3	.173	7.50	.468	2.50	.250
Dyers	10	52	2.995	74.13	4.626	1.425	.142
Engineers	10	3	.173	5.50	.343	1.833	.183
Finishers, female	9.96	55	3.169	56.95	3.564	1.035	.103
Helpers	10	32	18.43	31.85	1.988	.995	.099
Helpers, female	9.81	142	8.179	110.21	6.879	.776	.079
Knitters	9.46	15	.865	37.57	2.354	2.504	.263
Knitters, female	10	993	57.197	846.00	52.791	.852	.085
Laborers	10	21	1.209	37.75	2.356	1.797	.179
Machinist	10	1	.058	3.00	.787	3.00	.3 0
Machine operators	10	22	1.267	52.04	3.247	2.363	.236
Machine operators, female	10	20	1.153	30.00	1.872	1.50	.150
Picker man	10	1	.058	1.75	.119	1.75	.175
Packers, female	10	126	7.258	94.95	5.925	.753	.075
Seamers, female	10	3	.173	2.70	.188	.90	.090
Sewers, female	10	120	6.913	98.02	6.116	.816	.081
Spinners	10	27	1.555	44.59	2.783	1.651	.165
Spinners, female	10	50	2.881	28.60	1.775	.572	.057
Spoolers	10	4	.231	4.00	.250	1.00	.100
Sorters, female	10	8	.461	5.52	.345	.69	.069
Tufters	10	8	.461	6.14	.383	.792	.079
Twisters, female	10	3	.173	1.80	.112	.60	.060
Washers	10	2	.115	2.76	.172	1.38	.138
Watchmen	12	2	.115	2.70	.168	1.35	.112

KNIT GOODS—Continued.

OCCUPATION.	Average hours per day.	PERSONS.		WAGES.			
		Number.	Per cent.	Total per day.	Per cent.	Average.	
						Per day.	Per hour.
Winder	10	1	.058	.50	.031	.50	.050
Winders, female	10	14	.806	7.60	.474	.542	.054
Total and average	9.77	1,736	100.000	$1,602.23	100.000	$0.923	$0.094
Male	9.98	194	88.82	$331.24	20.674	$1.707	$0.171
Female	9.74	1,542	11.18	1,270.99	79.326	.824	.084
Foreladies	9.71	7	36.84	$9.50	26.034	$1.357	$0.139
Foremen	10	10	52.62	22.00	60.261	2.20	.220
Shipping clerks	10	2	10.54	5.00	13.705	.250	.250
Total and average	9.89	19	100.00	$36.50	100.000	$1.921	$0.193
Male	10	12	63.16	$27.00	73.972	$2.25	$0.225
Female	9.71	7	36.84	9.50	26.028	1.357	.139

Table B—Showing number of persons, male and female, and total number and proportion in each class of employes, classified by weekly earnings received, together with the average wage per day received in each class and the total number of persons employed by month and the range of employment for *all* establishments reporting either as to wages and employes, in detail, or classified weekly earnings.

CLASSIFICATION OF WEEKLY EARNINGS.					AVERAGE WAGES PER DAY.			NO. PERSONS EMP. BY MONTH.		
Classification.	No. of Persons.			Per cent.						
	Male.	Female.	Total		Male	Female.	Total	Month	No.	Range.
Under $5 00	61	970	1,031	47.93	$.621	$.691	$.689	Jan.	1,794	86.11
$ 5 00 but under 6 00	4	521	525	24.41	.863	.846	846	Feb	1,860	89.28
6 00 but under 7 00	32	284	316	14.69	1.000	1.019	1.017	Mar	1,953	93.74
7 00 but under 8 00	5	61	66	3.07	1.250	1.247	1.248	Apr.	2,042	98.01
8 00 but under 9 00	3	6	9	.42	1.403	1.365	1.381	May	2,043	98.06
9 00 but under 10 00	20	33	53	2.46	1.500	1.503	1.502	June	2,002	96.09
10 00 but under 12 00	77	24	101	4.70	1.739	1.750	1.742	July	2,059	98.83
12 00 but under 15 00	26	......	26	1.21	2.281	......	2.281	Aug	2 070	99.36
15 00 but under 20 00	22	......	22	1.02	2.818	......	2.818	Sept	2,045	98.16
20 00 and over	2	......	2	.09	3.500	....	3.500	Oct	2,086	100.00
								Nov	1,986	95.32
Total	252	1,899	2,151	100.0	$1.654	$.838	$.934	Dec.	1,879	90.19
								Ave.	1,985	95.28

LEATHER—26 ESTABLISHMENTS.

Table A.—Showing by occupation, classes, hours of work per day, number and proportion of persons employed, total wages and proportion of wages paid and average wages per day and per hour in each occupation for that portion of the industry reporting employes in detail.

OCCUPATION.	Average hours per day.	PERSONS.		WAGES.			
						Average..	
		Number.	Per cent.	Total per day.	Per cent.	Per day.	Per hour
Bark mill operator	10	1	.06	$1.75	.07	$1.75	$0.175
Beam handlers	10	22	1.37	40.31	1.54	1.832	.183
Blackers	10	2	.12	3.30	.13	1.65	.165
Blacksmiths	10	2	.12	3.74	.14	1.87	.187
Buffers	10	2	.12	5.00	.19	2.50	.250
Carpenters	10	9	.56	18.46	.71	2.051	.206
Cover cutters, female	9	6	.37	5.16	.19	.86	.095
Curriers	10	390	24.21	746.05	28.54	1.863	.186
Curriers' helpers	10	368	22.84	535.61	20.49	1.458	.145
Dampers and rollers	9	4	.25	6.68	.25	1.67	.185
Dyer	10	1	.06	2.33	.09	2.33	.233
Engineers	9.91	12	.75	31.16	1.19	2.601	.262
Extractor	10	1	.06	1.60	.06	1.60	.160
Firemen	10.07	13	.81	23.17	.89	1.782	.176
Finishers	10	214	13.29	388.14	14.85	1.813	.181
Finishers, helpers	10	19	1.18	20.68	.79	1.083	.108
Flesher	10	1	.06	2.00	.08	2.00	.200
Fur sewer, female	9	1	.06	1.50	.06	1.50	.166
Fur sewer's helper, female	9	1	.06	.75	.02	.75	.083
Furrier	10	1	.06	2.50	.09	2.50	.250
Hand shavers	9.57	14	.87	39.49	1.51	2.731	.284
Hide trimmer	10	1	.06	1.85	.07	1.85	.185
Laborers	10	203	12.60	311.19	11.90	1.531	.153
Loader	10	1	.06	1.13	.04	1.13	.113
Machinists	10	5	.31	13.00	.50	2.60	.260
Machine hands	9.80	5	.31	8.53	.33	1.706	.174
Machine hand, helper	10	1	.06	1.40	.05	1.40	.140
Oiler	10	1	.06	1.83	.07	1.83	.183
Piece workers, female	9	47	2.91	50.76	1.94	1.08	.120
Press girls	9	6	.37	5.76	.22	.96	.106
Press men	10	2	.13	2.84	.11	1.42	.142
Sewing machine, female,	8	1	.06	1.00	.04	1.00	.125
Setters	10	33	2.04	61.26	2.34	1.856	.185
Scourers	10	2	.13	3.00	.11	1.50	.150
Solemakers, female	9	96	5.96	77.04	2.94	.802	.089
Sorters	9.50	4	.25	8.50	.32	2.125	.223
Sorters, female	9	2	.13	1.50	.06	.75	.083
Staker	10	1	.06	1.83	.07	1.83	.183
Steam fitter	10	1	.06	2.25	.08	2.25	.225
Stuffers	10	4	.25	7.46	.28	1.865	.186
Splitters	9.50	4	.25	12.68	.48	3.17	.332
Splitters' helpers	9	13	.81	17.32	.66	1.332	.148
Splitters, female	9	9	.56	5.40	.20	.60	.066
Tanners	10	11	.68	28.37	1.08	2.67	.267
Tanners' helpers	10	21	1.31	24.10	.92	1.147	.114
Teamsters	10	24	1.49	41.10	1.64	1.712	.171
Veneer girls	9	12	.75	11.04	.42	.92	.102
Washers	9	2	.13	3.60	.14	1.80	.200
Watchmen	11	7	.44	10.79	.41	1.541	.140
Wheelmen	10	4	.25	11.83	.45	2.956	.295
Yardman	10	1	.06	2.00	.08	2.00	.200
Whiteners	9	4	.25	11.83	.45	2.956	.328
Total and average..	9.87	1,611	100.00	$2,614.24	100.00	$1,623	$0.164
Male	9.98	1,430	88.76	$2,454.26	93.883	$1,716	$0.171
Female	8.09	181	11.24	159.98	6.117	.833	.098
Bookkeeper	10	1	5.88	$1.50	3.85	$1.50	$0.150
Foremen	9.75	12	70.59	31.41	80.55	2.614	.268
Foreladies	9	3	17.65	4.08	10.47	1.36	.117
Shipping clerk	10	1	5.88	2.00	5.13	2.00	.200
Total and average..	9.05	17	100.00	$38.99	100.00	$2.293	$0.253
Male	9.78	14	82.35	$34.91	89.54	$2.493	$0.254
Female	9	3	17.65	4.08	10.46	1.36	.151

Table B—Showing number of persons, male and female, and total number and proportion in each class of employes, classified by weekly earnings received, together with the average wage per day received in each class and the total number of persons employed by month and the range of employment for *all* establishments reporting either as to wages and employes, in detail, or classified weekly earnings.

Classification of Weekly Earnings.					Average Wages Per Day.			No. Persons Emp. by Month.		
Classification.	No. of Persons.			Per cent.						
	Male	Female.	Total		Male	Female.	Total	Month.	No.	Range.
Under $5 00..	82	79	161	3.31	$.81	$.729	$.74	Jan ..	4,644	98.91
$ 5 00 but under 6 00..	28	72	100	2.06	.90	.886	.886	Feb ..	4,695	100.00
6 00 but under 7 00 .	110	51	161	3.32	1.023	1.078	1.047	Mar	4,647	98.98
7 00 but under 8 00..	279	8	287	5.91	1.289	1.210	1.287	April..	4,590	97 77
8 00 but under 9 00	321	2	323	6.65	1.375	1.350	1.375	May ..	4.558	97.08
9 00 but under 10 00..	1,789	6	1,795	36.96	1.565	1.580	1.565	June .	3,401	72.61
10 00 but under 12 00 .	1,008	....	1,008	20.76	1.790	......	1.790	July..	4,090	87.11
12 00 but under 15 00..	756	......	756	15.57	2.082	..	2.082	Aug ..	4,367	93.01
15 00 but under 20 00	254	.....	254	5.23	2.613	......	2.613	Sept .	4,375	93.18
20 00 and over........	11	......	11	.23	3.891	....	3.891	Oct .	4,490	95.63
								Nov...	4,447	94.72
Total................	4,638	218	4,856	100.00	$1.724	$.891	1.630	Dec...	4,521	96.29
								Ave .	4,403	93.78

LIME AND CEMENT—10 ESTABLISHMENTS.

Table A—Showing by occupation, classes, hours of work per day, number and proportion of persons employed, total wages and proportion of wages paid and average wages per day and per hour in each occupation for that portion of the industry reporting employes in detail.

Occupation.	Average hours per day.	Persons.		Wages.			
		Number.	Per cent.	Total per day.	Per cent.	Average.	
						Per day.	Per hour.
lacksmiths	10	2	.405	$4.00	.455	$2.000	$0.200
Carpenter	10	1	.203	1.80	.122	1.800	.180
Cooper	10	1	.203	1.75	.199	1.750	.175
Engineer	10	1	.203	3.00	.340	3.000	.300
Firemen	12	38	7.725	92.70	10.717	2.439	.203
Helpers	10	6	1.219	6.00	.682	1.000	.100
Kiln hands	10	18	3.655	30.52	3.469	1.696	.169
Laborers	10	28	5.685	42.51	4.835	1.518	.151
Menders (sacks)	10	15	3.045	3.00	.340	.200	.020
Millers	10	3	.609	6,60	.750	2.200	.220
Mill hands	10	30	6.100	48.64	5.522	1.621	.162
Quarry hands	10	335	68.105	613.21	69.805	1.830	.183
Teamsters	10	14	2.843	24.43	2.764	1.745	.174
Total and average..	10.15	492	100.000	$878.16	100.000	$1.785	$0.175
Foremen	10	8	100.000	$24.68	100.000	$3.085	$0.308

Table B.—Showing number of persons, male and female, and total number and proportion in each class of employes, classified by weekly earnings received, together with the average wage per day received in each class and the total number of persons employed by month and the range of employment for *all* establishments reporting either as to wages and employes, in detail, or classified weekly earnings.

Classification of Weekly Earnings.					Average Wages Per Day.			No. Persons Emp. by Month.		
Classification.	No. of Persons.			Per cent.						
	Male.	Female.	Total		Male.	Female.	Total	Month.	No.	Range.
Under $5 00..	15	......	15	2.87	$.200	....	$ 200	Jan...	209	41.80
$ 5 00 but under 6 00..	.... .	......	.....	......		.	..	Feb ..	281	56.20
6 00 but under 7 00	6	.. ..	6	1.15	1.000	......	1.000	Mar ..	416	83.20
7 00 but under 8 00 .	....	......	.....	......	..	......	..	April..	478	95.60
8 00 but under 9 00	5	......	5	.96	1.380	.	1.380	May ..	500	100.00
9 00 but under 10 00 .	178	......	178	34.10	1.528	..	1.528	June .	468	93.60
10 00 but under 12 00	54	.. ...	54	10.34	1.755	....	1.755	July .	435	87.00
12 00 but under 15 00 .	220	....	220	42.15	2.000	....	2.000	Aug ..	435	87.00
15 00 but under 20 00	44	....	44	8.43	2.631	....	2 631	Sept.	457	91.40
20 00 and over.........	.....	......	.....	......	......	. .	..	Oct...	457	91.40
								Nov ..	324	64.80
Total...............	522	..	522	100.00	$1.805	...	$1.805	Dec .	251	50.20
								Ave ..	392	78.40

LUMBER—78 ESTABLISHMENTS.

Table A—Showing by occupation, classes, hours of work per day, number and proportion of persons employed, total wages and proportion of wages paid and average wages per day and per hour in each occupation for that portion of the industry reporting employes in detail.

Occupation.	Average hours per day.	Persons.		Wages.			
		Number.	Per cent.	Total per day.	Per cent.	Average.	
						Per day.	Per hour.
Barnmen	10.60	15	.19	$25.10	.177	$1.673	$0.157
Blacksmiths	10.18	16	.20	38.60	.272	2.412	.236
Blacksmiths' helpers	10.03	8	.1	14.85	.106	1.856	.185
Boiler	10	1	.01	2.15	.015	2.15	.215
Bolters	10.35	2	.25	41.10	.290	2.055	.198
Boom men	10	57	.73	104.60	.738	1.835	.183
Boys	10	40	.51	40.49	.286	1.012	.101
Brakemen	10	11	.14	22.10	.156	2. 09	.200
Car builders	10	4	.05	9.35	.066	2.337	.233
Carpenters	9.53	260	3.33	509.50	3.595	1.959	.205
Chairmen	10	29	.37	51.75	.365	1.784	.178
Clippers	10	5	.06	9.25	.065	1.85	.185
Cooks	10.55	9	.11	20.50	.145	2.277	.215
Edgemen	10.09	103	1.32	245.31	1.731	2.381	.235
Edgemen, helpers	10	5	.06	9.49	.067	1.898	.189
Edgemen, catchers	10	12	.15	22.05	.156	1.837	.183
Electricians	10.28	7	.09	18.42	.130	2.631	.255
Engineers	10.28	81	1.04	215.21	1.518	2.657	.258
Engineers' helpers	10	12	.15	22.10	.156	1.841	.184
Feeders	10	18	.23	35.00	.247	1.944	.194
Filers	10.12	81	1.04	377.89	2.666	4.665	.460
Filers, helpers	10.17	17	.22	42.80	.302	2.517	.247
Firemen	10.43	48	.62	89.97	.635	1.874	.179
Graders	10.12	94	1.20	188.27	1.329	2.004	.198
Grabbers	10.82	23	.29	42.84	.302	1.862	.172
Laborers	10.13	3,772	48.41	6,161.63	43.481	1.633	.161
Lath mill men	10.05	37	.47	66.64	.470	1.801	.179
Lath shovers	10	18	.23	25.80	.181	1.433	.143
Lath stack men	10	9	.12	14.05	.099	1.561	.156
Lath tiermen	10.37	8	.10	13.25	.093	1.656	.159

LUMBER—Continued.

Occupation.	Average hours per day.	Persons.		Wages.			
		Number.	Per cent.	Total per day.	Per cent.	Average. Per day.	Average. Per hour
Loaders	10.20	145	1.86	239.40	1.690	1.651	.161
Lumber jackers	10	18	.23	29.10	.205	1.616	.161
Lumber markers	10	4	.05	8.18	.058	2.045	.204
Lumber wheelers	10	38	.48	67.50	.476	1.776	.177
Machinists	10.03	27	.34	76.24	.538	2.824	.281
Machinists' helpers	10	31	.40	40.44	.286	1.304	.130
Machine tenders	10.04	165	2.40	312.62	2.206	1.894	.188
Masons	9	7	.09	26.10	.184	3.728	.413
Mill hands	10	409	5.25	723.67	5.107	1.769	.176
Millwrights	10.30	26	.33	69.79	.493	2.684	.260
Millwrights' helpers	10.03	32	.41	56.50	.399	1.765	.175
Oilers	10.31	16	.20	31.26	.221	1.953	.189
Packers	10	12	.15	31.50	.222	2.625	.262
Painters	9.28	7	.09	15.10	.107	2.157	.232
Planers	10	10	.13	15.90	.112	1.59	.159
Pilers	10.14	275	3.53	563.48	3.976	2.049	.202
Riders	10.38	54	.69	111.93	.790	2.072	.199
Sawyers	10.14	221	2.83	713.12	5.032	3.226	.318
Sealers	10.06	15	.18	29.01	.205	1.933	.192
Setters	10.08	100	1.28	251.61	1.776	2.516	.249
Shingle men	10	8	.10	16.80	.119	2.10	.210
Shingle packers	10	9	.12	19.04	.134	2.115	.211
Shingle weavers	10	6	.07	12.36	.087	2.06	.206
Slashermen	10	19	.24	32.60	.230	1.715	.171
Sorters	10.42	73	.93	142.64	1.006	1.954	.187
Tallymen	9.96	63	.80	122.38	.864	1.942	.194
Teamsters	10.19	295	3.78	483.79	3.414	1.64	.160
Train men	10	2	.02	3.90	.028	1.95	.195
Trimmer men	10.06	65	.83	127.42	.899	1.96	.194
Turners	10	6	.07	10.90	.077	1.816	.181
Wagon worker	10	1	.01	2.30	.016	2.30	.230
Watchmen	10.80	45	.57	77.14	.544	1.714	.158
Woodsmen	10.43	695	8.92	1,101.25	7.772	1.584	.151
Yardmen	10	73	.93	125.70	.887	1.722	.172
Total and average	10.12	7,792	100.00	$14170.83	100.0 0	$1.819	$0.179
Clerks, female	10	2	1.41	$2.00	.509	$1.00	$0.100
Conductors	11	3	2.11	8.50	2.161	2.833	.257
Estimator	10	1	.71	2.00	.509	2.00	.200
Foremen	10.40	121	85.21	347.50	88.348	2.872	.276
Inspector	10	1	.71	1.90	.483	1.90	.190
Salesmen	10	2	1.41	4.41	1.121	2.205	.220
Shipping clerks	10.13	8	563	22.43	5.702	2.803	.276
Time keeper	10	1	.70	2.62	.666	2.62	.262
Waiter	10	1	.70	.67	.171	.67	.067
Waiters, female	10	2	1.41	1.30	.330	.65	.065
Total and average	10.37	142	100.00	$393.33	100.000	$2.77	$0.267
Male	10.38	138	97.18	$390.03	991.66	$2.826	$0.272
Female	10	4	2.82	3.30	.834	.825	.082

Table B—Showing number of persons, male and female, and total number and proportion in each class of employes, classified by weekly earnings received, together with the average wage per day received in each class and the total number of persons employed by month and the range of employment for *all* establishments reporting either as to wages and employes, in detail, or classified weekly earnings.

Classification of Weekly Earnings.					Average Wages per Day.			No. Persons Emp. by Month.		
Classification.	No. of Persons.			Per cent.						
	Male.	Female.	Total		Male.	Female.	Total	Month.	No.	Range.
Under $5 00	55	3	58	.45	$.737	$.65	$7.33	Jan ..	7,875	74.31
$ 5 00 but under 6 00	31	....	31	.24	.91		.91	Feb .	8,095	76.39
6 00 but under 7 00	207	18	225	1.73	1.05	1.00	1.049	Mar	7,591	71.63
7 00 but under 8 00	481	......	481	3.70	1.254		1.254	April..	9,505	89.69
8 00 but under 9 00	797	7	804	6.19	1.38	1.38	1.38	May ..	10,429	98.41
9 00 but under 10 00..	4,610	......	4,610	35.47	1.55	......	1.55	June .	10,597	100.00
10 00 but under 12 00	3,774	......	3,774	29.04	1.763	.....	1.763	July...	10,387	98.02
12 00 but under 15 00..	1,902	......	1,902	14.63	2.078	.....	2.078	Aug	10,278	96.99
15 00 but under 20 00	785	......	785	6.04	2.75	......	2.75	Sept	9,836	92.82
20 00 and over........	326	......	326	2.51	5.003	....	5.003	Oct...	10,227	96.51
								Nov .	8,927	84.24
Total...............	12,968	28	12,996	100.00	$1.836	$1.13	$1.835	Dec ..	7,391	69.74
								Ave...	9,262	87.40

MACHINERY—69 ESTABLISHMENTS.

Table A—Showing by occupation, classes, hours of work per day, number and proportion of persons employed, total wages and proportion of wages paid and average wages per day and per hour in each occupation for that portion of the industry reporting employes in detail.

Occupation.	Average hours per day.	Persons.		Wages.			
		Number.	Per cent.	Total per day.	Per cent	Average.	
						Per day.	Per hour.
Assemblers	10	51	.93	$86.75	.756	$1.701	$0.170
Annealers	10	3	.06	5.35	.047	1.783	.178
Apprentices	9.71	228	4.15	220.76	1.924	.966	.099
Belt lacer	10	1	.02	1.75	.015	1.75	.175
Boiler makers	10	7	.13	15.75	.137	2.25	.225
Boiler makers' helpers ..	10	6	.10	10.25	.089	1.708	.170
Blacksmiths	9.95	85	1.55	224.96	1.960	2.646	.265
Blacksmiths' helpers	9.99	56	1.01	98.43	.858	1.757	.175
Boys	10	14	.25	11.93	.103	.852	.085
Brazers	10	5	.09	12.85	.111	2.57	.257
Brass workers	9.75	8	.15	16.00	.139	2.00	.205
Cupola tenders	10	5	.09	11.10	.097	2.22	.222
Core makers	9.94	122	2.22	279.25	2.433	2.288	.230
Cornice makers	8	7	.13	21.80	.199	3.114	.389
Carpenters	9.87	146	2.66	314.01	2.736	2.164	.219
Crane men	10	12	.22	24.00	.209	2.00	.200
Case hardeners	10	3	.06	7.00	.06	2.333	.233
Chippers and grinders ..	10	8	.15	14.10	.123	1.762	.176
Electricians	9.79	51	.92	110.80	.965	2.172	.221
Engineers	10.68	16	.29	38.46	.335	2.403	.225
Firemen	11.16	6	.10	11.26	.098	1.876	.168
Galvanizers	10	4	.07	6.25	.054	1.562	.156
Laborers	9.64	510	9.28	819.35	7.14	1.606	.166
Machinists	9.88	1,561	28.41	3,971.87	34.609	2.544	.257
Machinists' helpers	9.87	1,099	18.37	1,637.28	14.267	1.622	[illegible]
Machine tenders	10	206	3.75	341.27	2.102	1.656	.165
Mason	10	1	.02	2.62	.023	2.62	.262
Motorman	10	1	.02	1.50	.013	1.50	.150
Moulders	9.91	610	11.10	1,610.64	14,035	2.64	.266
Moulders' helpers	10	40	.73	62.25	.542	1.556	.155
Millwrights	9.88	42	.76	108.30	.941	2.578	.260
Oilers	10	2	.04	3.60	.031	1.80	.180
Pickers	10	2	.04	3.20	.028	1.60	.160
Painters	10	28	.51	57.88	.504	2.067	.206

MACHINERY—Continued.

Occupation.	Average hours per day.	Persons.		Wages.			
		Number.	Per cent.	Total per day.	Per cent.	Average.	
						Per day.	Per hour.
Pattern makers	9.56	116	2.11	328.53	2.88	2.832	.296
Pipe fitters	10	16	.29	28.87	.252	1.804	.180
Platers	10	2	.04	5.35	.047	2.675	.267
Polishers	10	27	.49	72.20	.629	2.674	.267
Press hands	10	48	.87	77.70	.677	1.618	.161
Sand paperers	10	52	.95	93.44	.814	1.796	.179
Sewing girls	10	2	.04	1.90	.017	.95	.096
Slaters	8	5	.09	13.20	.011	2.64	.330
Steam fitter	10	1	.02	2.00	.017	2.00	.200
Strappers	10	5	.09	10.50	.091	2.10	.210
Structural workers	10	176	3.20	297.80	2.594	1.696	.169
Sweepers	10	10	.18	16.27	.142	1.627	.162
Teamsters	10	15	.26	30.64	.267	2.042	.204
Testers	10	43	.78	88.45	.771	2.056	.205
Tinners	10	60	1.09	136.35	1.188	2.722	.272
Tinners' helpers	10	9	.16	9.00	.078	1.00	.100
Tool dressers	10	3	.06	9.70	.085	3.233	.323
Watchmen	11.9	22	.40	38.21	.332	1.736	.145
Weavers	10	2	.04	3.00	.026	1.50	.150
Wood workers	10	24	.44	50.45	.439	2.102	.210
Total and average	9.87	5,494	100.00	$11476.13	100.000	$2.089	$0.211
Male	9.87	5,492	99.96	$11474.23	99.983	$2.089	$0.211
Female	10	2	.04	1.90	.017	.95	.096
Bookkeepers, female	10	2	.78	$3.34	.523	$1.67	$0.167
Chemist	10	1	.39	1.50	.234	1.50	.150
Clerks	10	100	39.22	201.52	31.561	2.015	.201
Clerks, female	10	10	3.92	9.75	1.527	.975	.097
Draughters	7.94	51	20.00	151.89	23.788	2.978	.375
Foremen	9.96	70	27.45	233.24	36.531	3.332	.334
Inspectors	10	7	2.75	11.75	1.841	1.678	.167
Shippers	10	7	2.75	12.42	1.946	1.774	.177
Stenographer	10	1	.39	2.00	.313	2.00	.200
Stenographers, female	10	6	2.35	11.08	1.736	1.846	.184
Total and average	9.58	255	100.00	$638.49	100.000	$2.5 4	$0.261
Male	9.54	237	92.94	$614.32	96.219	$2.592	$0.271
Female	10	18	7.06	24.14	3.781	1.341	.134

Table B—Showing number of persons, male and female, and total number and proportion in each class of employes, classified by weekly earnings received, together with the average wage per day received in each class and the total number of persons employed by month and the range of employment for *all* establishments reporting either as to wages and employes, in detail, or classified weekly earnings.

Classification of Weekly Earnings.					Average Wages Per Day.			No. Persons Emp. by Month.		
Classification.	No. of Persons.			Per cent						
	Male	Female.	Total		Male	Female.	Total	Month	No.	Range
Under $5 00	346	18	364	4.68	$.691	$.750	$.693	Jan	7,155	95.06
$ 5 00 but under 6 00	141	11	151	1.96	.923	.950	.923	Feb	7,271	96.60
6 00 but under 7 00	337	3	340	4.37	1.025	1 000	1.025	Mar	7,527	100.00
7 00 but under 8 00	259	4	243	3.13	1.249	1.250	1.249	April	7,515	99.84
8 00 but under 9 00	357	1	358	4.60	1.386	1.340	1.386	May	7,261	96.46
9 00 but under 10 00	1,43.	1	1,433	18.43	1.583	1.5 0	1.583	June	7,151	95.00
10 00 but under 12 00	1,309	.....	1,309	16.83	1.775	...	1.775	July	6,820	90.61
12 00 but under 15 00	1,191	5	1,196	15.38	2.152	2.066	2.151	Aug	7,074	94.05
15 00 but under 20 00	2,066	.....	2,066	26.57	2.753	....	2.753	Sept	7,367	97.87
20 00 and over	315	....	313	4.05	3.725	...	3.725	Oct	8,184	95.44
								Nov	6,930	92.07
Total	7,733	43	7,776	100.00	$2.110	$1.303	$2.109	Dec	6,587	87.51
								Ave	7,154	95.04

MALT—10 ESTABLISHMENTS.

Table A—Showing by occupation, classes, hours of work per day, number and proportion of persons employed, total wages and proportion of wages paid and average wages per day and per hour in each occupation for that portion of the industry reporting employes in detail.

OCCUPATION.	Average hours per day.	PERSONS.		WAGES.			
		Number	Per cent.	Total per day.	Per cent.	Average.	
						Per day.	Per hour.
Barnmen	10	2	1.03	$4.00	1.069	$2.00	$0.200
Blacksmith	10	1	.52	2.00	.534	2.00	.200
Bottlers	10	5	2.57	5.00	1.333	1.00	.100
Boys	10	2	1.03	2.00	.534	1.00	.100
Brewers	10	6	3.09	11.64	3.108	1.94	.194
Carpenter	10	1	.52	2.00	.534	2.00	.200
Elevator men	10	8	4.13	18.40	4.915	2.30	.230
Engineers	10.15	13	6.70	32.82	8.766	2.524	.248
Firemen	11.45	11	5.67	19.80	5.288	1.80	.157
Helpers	10	6	3.09	12.00	3.206	2.00	.200
Laborers	10	52	26.80	87.15	23.024	1.676	.167
Machinists	10	2	1.03	5.65	1.570	2.325	.232
Machinists' helpers	10	2	1.03	2.75	.735	1.375	.137
Malt house men	10	7	3.61	21.00	5.610	3.00	.300
Malsters	10.13	46	23.71	88.24	23.570	1.918	.189
Millwright	10	1	.52	2.75	.735	2.75	.275
Roasters	12	5	2.57	10.41	2.783	2.082	.173
Teamsters	10.47	21	10.83	42.00	11.218	2.00	.191
Tinsmith	10	1	.52	2.00	.534	2.00	.200
Watchmen	10	2	1.03	3.72	.994	1.86	.186
Total and average	10.22	194	100.00	$375.33	100.000	$1.935	$0.189
Foremen	10	2	100.00	$4.85	100.00	$2.425	$0.242

Table B—Showing number of persons, male and female, and total number and proportion in each class of employes, classified by weekly earnings received, together with the average wage per day received in each class and the total number of persons employed by month and the range of employment for *all* establishments reporting either as to wages and employes, in detail, or classified weekly earnings.

CLASSIFICATION OF WEEKLY EARNINGS.					AVERAGE WAGES PER DAY.			NO. PERSONS EMP. BY MONTH.		
Classification.	No. of Persons			Per cent.						
	Male.	Female.	Total		Male	Female.	Total	Month.	No.	Range.
Under $5 00	4	2	6	$1.29	$.75	$.70	$.733	Jan.	427	93.03
$ 5 00 but under 6 00	.....	3	3	.65	.....	.85	.85	Feb.	429	93.46
6 00 but under 7 00	9	6	15	3.24	1.00	1.00	1.00	Mar.	335	94.77
7 00 but under 8 00	3	.....	3	.65	1.25	.....	1.25	April.	437	95.21
8 00 but under 9 00	8	.....	8	1.73	1.34	.....	1.34	May.	436	94.99
9 00 but under 10 00	22	1	23	4.97	1.50	1.50	1.50	June.	423	92.16
10 00 but under 12 00	95	.....	95	20.5	1.766	.....	1.766	July.	425	90.41
12 00 but under 15 00	246	.....	246	53.13	2.022	.....	2.022	Aug.	361	78.65
15 00 but under 20 00	62	.....	62	13.39	2.825	.....	2.825	Sept.	402	87.58
20 00 and over	2	.....	2	.43	3.50	.....	3.50	Oct.	434	96.73
								Nov.	436	94.99
Total	451	12	463	100.00	$1.94	$1.204	$2,912	Dec.	459	100.00
								Ave.	425	92.59

MIRRORS AND GLASS—5 ESTABLISHMENTS.

Table A—Showing by occupation, classes, hours of work per day, number and proportion of persons employed, total wages and proportion of wages paid and average wages per day and per hour in each occupation for that portion of the industry reporting employes in detail.

Occupation.	Average hours per day.	Persons.		Wages.			
		Number.	Per cent.	Total per day.	Per cent.	Average.	
						Per day.	Per hour.
Blacksmiths	10	2	.55	$4.40	.402	$2.200	$0.220
Bevelers	9	15	4.10	28.09	2.573	1.872	.208
Cutters	9	6	1.63	15.91	1.458	2.651	.294
Edgers	9	2	.55	3.50	.321	1.750	.194
Engineers	9.87	4	1.10	7.90	.723	1.975	.200
Glaziers	9.00	5	1.36	11.43	1.046	2.286	.254
Glass blowers	8.50	90	24.59	688.50	63.059	7.650	.9 0
Glass painters	8.00	2	.55	7.33	.672	3.665	.458
Glass workers	9.00	17	4.64	37.17	3.405	2.186	.242
Helpers	8.59	145	39.61	139.88	12.812	.964	.112
Laborers	10.00	52	14.21	96.00	8.792	1.846	.184
Machinists	10.00	2	.55	8.16	.748	4.080	.408
Masons	9.33	3	.82	4.80	.439	1.600	.171
Mounter	9.00	1	.27	2.50	.229	2.500	.277
Packers	9.00	2	.55	3.83	.351	1.915	.212
Polishers	9.00	3	.82	6.50	.596	2.166	.240
Silverers	9.00	2	.55	4.00	.366	2.000	.222
Teamsters	9.92	13	3.55	21.92	2.008	1.686	.169
Total and average	8.90	366	100.00	$1,091.82	100.000	$2.983	$0.334
Designer	9	1	100.00	$4.00	100.000	$4.00	$0.444

Table B—Showing number of persons, male and female, and total number and proportion in each class of employes, classified by weekly earnings received, together with the average wage per day received in each class and the total number of persons employed by month and the range of employment for *all* establishments reporting either as to wages and employes, in detail, or classified weekly earnings.

Classification of Weekly Earnings					Average Wages Per Day.			No. Persons Emp. by Month.		
Classification.	No. of Persons.			Per cent.						
	Male.	Female.	Total		Male.	Female.	Total	Month.	No.	Range.
Under $5 00	58	.....	58	15.83	$ 737	......	$.737	Jan...	370	99.46
$ 5 00 but under 6 00	.....	......	.	......	....	....	......	Feb...	367	98.66
6 00 but under 7 00	57	......	57	15.53	1.000	.....	1.000	Mar..	368	98.92
7 00 but under 8 00	26	......	26	7.08	1.293	.....	1.293	April.	367	98.66
8 00 but under 9 00	....	.....	......	......	.. ..	......	......	May..	362	97.31
9 00 but under 10 00	37	.....	37	10.08	1.544	......	1.544	June..	361	97.04
10 00 but under 12 00	22	......	22	5.98	1.755	......	1.755	July..	120	32.26
12 00 but under 15 00	55	......	55	14.98	2.049	......	2.049	Aug..	125	33.60
15 00 but under 20 00	19	.....	19	5.18	2.753	......	3.753	Sept..	352	96.62
20 00 and over	93	....	93	25.34	7.543	.. ..	7.543	Oct...	362	97.31
								Nov..	366	98.34
Total	367	......	367	100.00	2.986	.....	2.986	Dec...	372	100.00
								Ave...	324	86.83

OFFICE AND STORE FURNITURE—17 ESTABLISHMENTS.

Table A.—Showing by occupation, classes, hours of work per day, number and proportion of persons employed, total wages and proportion of wages paid and average wages per day and per hour in each occupation for that portion of the industry reporting employes in detail.

OCCUPATION.	Average hours per day.	PERSONS.		WAGES.			
		Number.	Per cent.	Total per day.	Per cent.	Average.	
						Per day.	Per hour.
Apprentices	10	2	.17	$2.00	.094	$1.00	$0.100
Blacksmith	10	1	.09	1.60	.076	1.60	.160
Cabinet makers	9.67	263	22.43	535.82	25.316	2.037	.210
Carpenters	9.97	84	7.16	172.18	8.135	2.05	.205
Carpenters' helpers	10	2	.17	3.50	.165	1.75	.175
Carvers	9.89	29	2.47	75.36	3.560	2.598	.762
Casting setters	10	11	.94	15.30	.723	1.39	.139
Cupola tenders	10	7	.60	10.50	.496	1.50	.150
Drill pressmen	10	7	.60	4.65	.230	.657	.065
Drillers	10	8	.68	14.00	.661	1.75	.175
Engineers	10.50	8	.68	20.35	.961	2.543	.241
Finishers	9.68	95	8.10	181.63	8.581	1.911	.197
Finishers' helpers	10	6	.51	3.60	.170	.60	.060
Firemen	10	6	.51	9.84	.464	1.64	.164
Grinders	10	5	.43	7.50	.354	1.50	.150
Glue hands	10	9	.77	12.60	.595	1.40	.140
Glue hands' helpers	10	2	.17	1.10	.052	.55	.055
Helpers	9.97	155	13.22	183.30	8.660	1.182	.118
Laborers	9.86	65	5.54	96.71	4.570	1.508	.158
Lumbermen	10	13	1.11	18.80	.888	1.446	.144
Machinists	10	17	1.43	37.05	1.751	2.179	.217
Machine carvers	10	3	.26	5.00	.236	1.666	.166
Machine hands	10	151	12.87	261.98	12.378	1.735	.173
Machine hands' helpers	10	24	2.04	14.41	.681	.604	.060
Metal workers	10	7	.60	14.00	.661	2.00	.200
Mill hands	10	4	.34	6.00	.283	1.50	.150
Millwright	10	1	.09	2.25	.106	2.25	.225
Moulders	10	65	5.46	181.20	8.561	2.787	.278
Nickel platers	10	3	.26	5.25	.248	1.75	.175
Packers	10	15	1.28	23.50	1.110	1.566	.156
Packers' helper	10	1	.08	.60	.028	.60	.060
Painters	10	28	2.38	55.45	2.619	1.98	.198
Pattern maker	10	1	.08	3.00	.142	3.00	.300
Polishers	10	7	.60	16.25	.767	2.321	.232
Polishers' helpers	10	4	.34	4.35	.205	1.087	.108
Saw filers	10	2	.17	5.00	.236	2.50	.250
Sawyers	10	3	.26	6.50	.307	2.166	.216
Stone cutters	10	3	.26	7.50	.354	2.50	.250
Sweeper	10	1	.17	1.50	.072	1.50	.150
Teamsters	10	9	.77	13.90	.656	1.544	.154
Tinners	10	10	.85	15.00	.708	1.50	.150
Upholsterers	10	6	.51	13.50	.637	2.25	.225
Watchmen	11	10	1.70	16.00	.755	1.60	.145
Wood workers	10	20	.85	37.00	1.748	1.85	.185
Total and average	9.90	1,173	100.00	$2,116.53	100.000	$1.804	$0.182
Bookkeeper	10	1	3.85	$2.00	2.865	$2.00	$0.200
Foremen	10	20	76.92	52.55	75.287	2.627	.262
Inspector	10	1	3.85	2.25	3.223	2.25	.225
Organ experts	10	2	7.68	7.50	10.746	3.75	.375
Stock keeper	10	1	3.85	2.00	2.865	2.00	.200
Superintendent	10	1	3.85	3.50	5.014	3.50	.350
Total and average	10	26	100.00	$69.80	100.000	$2.684	$0.268

Table B—Showing number of persons, male and female, and total number and proportion in each class of employes, classified by weekly earnings received, together with the average wage per day received in each class and the total number of persons employed by month and the range of employment for *all* establishments reporting either as to wages and employes, in detail, or classified weekly earnings.

Classification of Weekly Earnings.					Average Wages Per Day.			No Persons Emp by Month.		
Classification.	No. of Persons.			Per cent.	Male	Female.	Total	Month.	No.	Range.
	Male.	Female.	Total							
Under $5 00..	71	......	71	5 75	$.649	......	$.649	Jan	1,245	99.60
$ 5 00 but under 6 00	8	...	8	.65	.869	.....	.869	Feb.	1,246	99.68
6 00 but under 7 00	29	......	29	2.35	1.003	......	1.003	Mar..	1,251	100.00
7 00 but under 8 00..	120	...	120	9.71	1.25	....	1.25	April..	1,229	98.32
8 00 but under 9 00	88	....	88	7.13	1.364	......	1.364	May..	1,236	98.88
9 00 but under 10 00	239	.....	239	19.33	1.518	.. ..	1.518	June..	1,232	98.56
10 00 but under 12 00	139	....	139	11 24	1.765	..	1.765	July..	1,076	86.08
12 00 but under 15 00..	337	...	337	27.26	2.152	....	2.152	Aug..	994	79.52
15 00 but under 20 00	196	......	196	15.85	2.718	....	2 718	Sept.	1,121	89.68
20 00 and over	9	....	9	.73	3.786	....	3.786	Oct...	1,130	90.70
								Nov	1,155	92.40
Total...............	1,236	.....	1,236	100.00	1.823	... .	1.823	Dec...	1,207	96.56
								Ave .	1,177	94.16

PAPER AND PULP—27 ESTABLISHMENTS.

Table A—Showing by occupation, classes, hours of work per day, number and proportion of persons employed, total wages and proportion of wages paid and average wages per day and per hour in each occupation, for that portion of the industry reporting employes in detail.

Occupation.	Average hours per day.	Persons.		Wages.			
		Number.	Per cent.	Total per day.	Per cent.	Average.	
						Per day.	Per hour.
Acid men	10	2	.0691	$3.60	.08	$1.80	$0.180
Acid men's helpers	10	2	.0691	2.80	.07	1.40	.140
Back tenders	11.63	35	1.2098	51.76	.121	1.478	.127
Balers	10	2	.0691	3.00	.07	1.50	.150
Barker men	10	17	.5876	25.50	.60	1.50	.150
Beater men	10.82	34	1.1752	59.40	1.39	1.747	.161
Beater men's helpers ..	11	28	.9678	42.00	.98	1.50	.136
Blacksmiths	10	2	.0691	3.55	.08	1.775	.177
Calendermen	10	16	.5530	27.43	.64	1.714	.171
Calender men's helpers..	10	6	.2074	8.01	.19	1.335	.133
Case makers	10	4	.1382	6.85	.16	1.712	.171
Carpenters	10	56	1.9357	129.90	3.03	2.319	.231
Chip picker	10	1	.0346	.50	.01	.50	.050
Chippermen	10	2	.0691	2.40	.06	1.20	.120
Cooks	12	7	.2420	14.32	.33	2.045	.170
Counters, female	9.56	16	.5530	16.80	.39	1.05	.109
Cutters	10	5	.1730	7.45	.17	1.49	.149
Cutter boys	10	4	.1383	3.00	.07	.75	.075
Cutter girls	10.15	53	1.8320	45.52	1.08	.858	.084
Drayman	10	1	.0346	1.50	.03	1.50	.150
Engineers	10.33	60	2.0740	127.95	2.99	2.132	.206
Engineers' helpers	11	14	.4839	23.04	.53	1.645	.148
Finishers	9.32	87	3.0072	130.63	3.05	1.501	.161
Finishers, female	9.85	67	2.3159	56.35	1.31	.841	.085
Firemen	9.86	96	3.3183	166.24	3.89	1.731	.175
Grindermen	10.84	19	.6567	29.28	.68	1.541	.142
Harkers	10	19	.6567	28.50	.66	1.50	.150
Laborers	10.53	1,240	42.8621	1,832.67	42.81	1.477	.140
Laborers, female	10	52	1.7974	41.90	.98	.806	.080

PAPER AND PULP—Continued.

Occupation.	Average hours per day.	Persons.		Wages.			
						Average.	
		Number.	Per cent.	Total per day.	Per cent.	Per day.	Per hour.
Label boys	10	2	.0691	2.00	.05	1.00	.100
Loft boys	8	25	.8641	18.75	.44	.75	.093
Machine girls	10	33	1.1407	26.40	.62	.80	.080
Machine tenders	10.92	104	3.5949	280.06	6.55	2.692	.246
Mach. tenders' helpers	10.51	120	4.1479	173.06	4.05	1.442	.137
Machinists	11.02	39	1.3481	101.60	2.37	2.605	.236
Machinists' helpers	11.26	142	4.9084	228.50	5.34	1.609	.142
Masons	10	2	.0691	4.50	.10	2.25	.225
Millwrights	10.02	38	1.3135	88.52	2.07	2.329	.232
Oilers	11	4	.1382	6.00	.14	1.50	.136
Packers	9.23	13	.4494	19.67	.46	1.513	.163
Packers' helpers	10	9	.3111	9.41	.22	1.045	.104
Press feeders	10	5	.1730	3.75	.10	.75	.075
Paster girl	10	1	.0346	.50	.01	.50	.050
Plumber	10	1	.0346	2.50	.06	2.500	.250
Rag cutters	10	14	.4839	20.37	.48	1.455	.145
Rag feeder, female	8.00	1	.0346	1.05	.02	1.05	.131
Rag pickers, female	9.50	33	1.1407	24.75	.58	.75	.078
Rag room girls	8	17	.5876	13.60	.32	.80	.100
Rag room men	9	3	.1037	5.55	.13	1.850	.205
Rag sorters	10	17	.5876	24.60	.57	1.447	.144
Rag sorters, female	9.36	187	6.4639	168.80	3.95	.902	.095
Ruler	9	1	.0346	3.00	.07	3.00	.339
Rulers' helpers	9	2	.0691	3.00	.07	1.50	.166
Sawyers	10	3	.1037	4.80	.11	1.60	.160
Scalers	9	6	.2074	8.25	.19	1.375	.152
Screen boys	10.30	33	1.1407	31.25	.73	.947	.091
Size makers	9.60	5	.1730	8.25	.19	1.65	.171
Size makers' helper	9	1	.0346	1.00	.02	1.00	.111
Skinners	10.76	43	1.4863	43.21	1.01	1.004	.093
Splittermen	10	3	.1037	4.30	.10	1.433	.143
Sweeper	9	1	.0346	1.40	.03	1.40	.155
Teamsters	10.33	3	.1037	7.65	.18	2.55	.246
Trimmers	9	5	.1730	9.65	.23	1.93	4214
Truckers	10	6	.2074	10.00	.23	1.666	.166
Watchmen	10.57	7	.2420	13.35	.31	1.907	.180
Weighers	10	2	.0691	3.00	.07	1.50	.150
Wood carriers	10.50	4	.1383	2.66	.06	.665	.063
Yardmen	10	7	.2420	10.02	.23	1.431	.143
Total and average	10.31	2,889	100.0000	$4,280.58	100.00	$1.481	$0.143
Male	10.46	2,429	84.08	$3,884.91	90.60	$1.599	$0.152
Female	9.61	460	15.92	395.57	9.40	.860	.089
Foremen	11.25	24	68.57	$60.50	78.65	$2.52	$0.224
Inspectors, female	10	4	11.43	3.80	4.94	.95	.095
Shippers	10	4	11.43	8.25	10.73	2.062	.206
Shippers' helper	10	3	8.57	4.37	5.68	1.456	.145
Total and average	10.85	35	100.00	$76.92	100.00	$2.359	$0.217
Male	10.96	31	88.57	$73.12	95.06	$2.012	$0.182
Female	10.00	4	11.43	3.80	4.94	.95	.095

Table B—Showing number of persons, male and female, and total number and proportion in each class of employes, classified by weekly earnings received, together with the average wage per day received in each class and the total number of persons employed by months and the range of employment for *all* establishments reporting either as to wages and employes, in detail, or classified weekly earnings.

CLASSIFICATION OF WEEKLY EARNINGS.					AVERAGE WAGES PER DAY.			NO. PERSONS EMP. BY MONTH.		
Classification.	No. of Persons.			Per cent.						
	Male	Female.	Total		Male.	Female	Total	Month.	No.	Range.
Under $5 00	68	256	324	9.09	$.743	$.758	$.735	Jan.	3,497	99.21
$5 00 but under 6 00	33	111	144	4.04	.89	.865	.871	Feb	3,417	96.94
6 00 but under 7 00	190	100	290	8.14	1.037	1.012	1.027	Mar.	3.525	100.00
7 00 but under 8 00	206	8	214	6.01	1.25	1.233	1.249	April	3,473	98.52
8 00 but under 9 00	212	6	218	6.12	1.388	1.40	1.389	May	3,493	99 09
9 00 but under 10 00	1,539	4	1.543	43.31	1.523	1.55	1.524	June	3,510	99.57
10 00 but under 12 00	363	1	364	10.22	1.765	1.75	1.765	July	3,514	99.69
12 00 but under 15 00	222	3	225	6.31	2.105	2.10	2.105	Aug.	3,517	99.77
15 00 but under 20 00	202	......	202	5.67	2.709	.....	2.709	Sept	3,481	98.75
20 00 and over	39	...	39	1.09	3.766	...	3.766	Oct.	3,443	97.67
								Nov	3,478	98.67
Total	3,074	489	3,563	100.00	$1.609	$.861	$1.49	Dec	3,502	99.38
								Ave	3,488	98.95

PEARL BUTTONS—6 ESTABLISHMENTS.

Table A—Showing by occupation, classes, hours of work per day, number and proportion of persons employed, total wages and proportion of wages paid and average wages per day and per hour in each occupation for that portion of the industry reporting employes in detail.

OCCUPATION.	Average hours per day.	PERSONS.		WAGES.			
		Number.	Per cent.	Total per day.	Per cent.	Average.	
						Per day.	Per hour.
Button cutters	10	116	47.16	$165.43	6.028	$1.427	$0.142
Carder girls	10	64	26.02	47.81	17.424	.747	.074
Machine operators	10	66	26.82	61.16	22.288	.921	.092
Total and average	10	246	100.00	$274.40	100.00	$1.115	$0.111
Male	10	182	73.98	$226.59	82.577	$1.245	$0.124
Female	10	64	26.02	47.81	17.423	.747	.074
Foreman	10	1	100.00	$3.00	100.00	$3.00	$0.300

Table B—Showing number of persons, male and female, and total number and proportion in each class of employes, classified by weekly earnings received, together with the average wage per day received in each class and the total number of persons employed by months and the range of employment for *all* establishments reporting either as to wages and employes, in detail, or classified weekly earnings.

Classification of Weekly Earnings.					Average Wages Per Day.			No. Persons Emp. by Month.		
Classification.	No. of Persons.			Per cent.	Male.	Female.	Total	Month.	No.	Range.
	Male.	Female.	Total							
Under $5 00	41	46	87	35.22	$.63	$.648	$.637	Jan...	255	100.00
$ 5 00 but under 6 00	20	13	33	13.36	.973	.848	.923	Feb ..	254	99.61
6 00 but under 7 00	18	2	20	8.10	1.055	1.06	1.056	Mar ..	249	97.65
7 00 but under 8 00	11	1	12	4.86	1.283	1.20	1.276	Apr.	243	95.29
8 00 but under 9 00	17	1	18	7.29	1.413	1.37	1.411	May ..	238	93.33
9 00 but under 10 00	53	1	54	21.86	1.515	1.61	1.518	June .	229	89.80
10 00 but under 12 00	11	......	11	4.45	1.781	......	1.781	July..	223	87.45
12 00 but under 15 00..	8	......	8	3.24	2.093	......	2.093	Aug ..	228	89 41
15 00 but under 20 00	4	......	4	1.62	2.805	......	2.805	Sept..	208	81.57
20 00 and over	......	......	......	......	......	......	.	Oct. .	208	81.57
								Nov .	208	81.57
Total	183	64	247	100.00	$1.254	$ 747	$1.123	Dec ..	208	81.57
								Ave ..	229	89.80

SADDLERY—8 ESTABLISHMENTS.

Table A—Showing by occupation, classes, hours of work per day, number and proportion of persons employed, total wages and proportion of wages paid and average wages per day and per hour in each occupation for that portion of the industry reporting employes in detail.

Occupation.	Average hours per day.	Persons.		Wages.			
		Number.	Per cent.	Total per day.	Per cent.	Average.	
						Per day.	Per hour.
Boat maker	10	1	1.03	$1.50	1.133	$1.50	$0.150
Collar maker	10	1	1.03	2.34	1.766	2.34	.234
Cutters	10	2	2.06	4.67	3.528	2.335	.233
Harness makers	10	31	31.96	67.07	50.672	2.163	.216
Helpers	10	11	11.34	11.74	8.869	1.067	.106
Helper, female	10	1	1.03	1.00	.755	1.00	.100
Net maker	10	1	1.03	2.33	1.760	2.33	.233
Pad makers, female	10	5	5.15	4.15	3.135	.83	.083
Piece workers	10	7	7.22	11.70	8.839	1.671	.167
Piece workers, female....	10	36	37.12	24.04	18.162	.667	.066
Pressman	10	1	1.03	1.83	1.381	1.83	.183
Total and average..	10	97	100.00	$132.36	100.000	$1.364	$0.136
Male	10	55	56.70	$103.17	77.947	$1.875	$0.187
Female	10	42	43.30	29.19	22.053	.695	.069
Foremen	10	2	100.00	$6.92	100.00	$3.46	$0.346

Table B—Showing number of persons, male and female, and total number and proportion in each class of employes, classified by weekly earnings received, together with the average wage per day received in each class and the total number of persons employed by months and the range of employment for *all* establishments reporting either as to wages and employes, in detail, or classified weekly earnings.

Classification of Weekly Earnings.					Average Wages Per Day.			No. Persons Emp. by Month.		
Classification.	No. of Persons.			Per cent.						
	Male.	Female.	Total		Male.	Female	Total	Month.	No.	Range.
Under $5 00..	11	52	63	20.12	$.83	$.647	$.662	Jan ..	332	95.95
$ 5 00 but under 6 00..	8	30	38	12 13	.88	.881	.881	Feb...	329	95.09
6 00 but under 7 00..	11	19	30	9.61	1.00	1.00	1.00	Mar...	346	100.00
7 00 but under 8 00..	12	8	20	6.39	1.27	1.25	1.262	April..	319	92 19
8 00 but under 9 00..	17	4	21	6.71	1.386	1.35	1.38	May...	332	95.95
9 00 but under 10 00..	25	2	27	8.63	1.50	1.50	1.50	June..	297	85.84
10 00 but under 12 00..	33	1	34	10 86	1.796	......	1.796	July..	266	76.88
12 00 but under 15 00..	43	......	43	13.74	2.161	......	2.161	Aug...	250	72.25
15 00 but under 20 00..	31	......	31	9.90	2.968	......	2.968	Sept..	273	78.90
20 00 and over....... .	6	......	6	1.91	3.92	......	3.92	Oct ...	264	76.30
								Nov. .	273	78.90
Total.......	197	116	313	100.00	$1.931	$.695	$1.407	Dec...	304	87.86
								Ave...	299	86.41

SASH, DOORS, ETC.—45 ESTABLISHMENTS.

Table A—Showing by occupation, classes, hours of work per day, number and proportion of persons employed, total wages and proportion of wages paid and average wages per day and per hour in each occupation for that portion of the industry reporting employes in detail.

Occupation.	Average hours per day.	Persons.		Wages.			
		Number.	Per cent.	Total per day.	Per cent.	Average.	
						Per day.	Per hour.
Bricklayers	9	3	.14	$13.50	.380	$4.50	$0.500
Bricklayers' helper	9	1	.05	2.25	.060	2.25	.250
Bundler	10	1	.05	1.00	.028	1.00	.100
Cabinet makers	9	2	.09	4.50	.126	2.25	.250
Cabinet makers' helper..	10	1	.05	1.10	.030	1.10	.110
Carpenters	9.80	352	15.84	730.19	20.591	2.074	.211
Carvers	10	2	.09	5.25	.148	2.625	.262
Door makers	10	5	.23	10.25	.289	2.05	.205
Engineers	10	13	.59	30.93	.875	2.379	.287
Filers	10	3	14	6.70	.188	2.333	.233
Finishers	10	5	.23	10.50	.298	2.10	.210
Firemen	9.85	7	.31	10.93	.308	1.561	.158
Firemen's helpers	9.50	2	.09	3.38	.095	1.69	.177
Framemakers	10	2	.09	5.00	.141	2.50	.250
Glaziers	9.86	15	.68	29.10	.820	1.94	.196
Glaziers' helpers	10	2	.09	2.66	.075	1.33	.133
Helpers	9.97	342	15.39	302.02	8.516	.883	.088
Laborers	9.96	483	21.74	696.57	19.643	1.442	.144
Machinists	9.90	116	5.22	226.86	6.397	1.955	.197
Machinists' helpers	10	13	.59	19.75	.557	1.519	.151
Machine tenders	9.99	612	27.59	1,046.01	29.498	1.709	.171
Machine tenders, female.	10	5	.23	4.10	.115	.82	.082
Mach. tenders' helpers..	9.93	63	2.84	76.34	2.153	1.211	.121
Millwright	10	1	.05	3.00	.084	3.00	.300
Packer	10	1	.05	1.75	.049	1.75	.175
Painters	9.87	40	1.80	64.34	1.815	1.608	.162
Piece workers	10	2	.09	3.00	.084	1.50	.150
Pilers	10	4	.18	6.00	.168	1.50	.150

SASH, DOORS, ETC.—Continued.

OCCUPATION.	Average hours per day	PERSONS.		WAGES.			
		Total.	Per cent.	Total per day.	Per cent.	Average.	
						Per day.	Per hour.
Sash cutter	10	1	.05	2.50	.070	2.50	.250
Sash makers	10	2	.09	4.50	.126	2.25	.225
Sash primer	10	1	.05	1.00	.028	1.00	.100
Sawyers	10	8	35	15.80	.445	1.975	.197
Scaler	10	1	.05	1.75	.049	1.75	.175
Shopmen	10	2	.09	4.50	.126	2.25	.225
Slasher	10	1	.05	2.75	.080	2.75	.275
Stitchers, hand	10	3	.14	5.25	.148	1.75	.175
Stone masons	9	5	.23	18.00	.507	3.60	.400
Stone masons' helpers	10	13	.58	26.00	.733	2.00	.200
Sweeper	10	1	.05	1.00	.028	1.00	.100
Teamsters	10	31	1.40	49.87	1.407	1.6 8	.160
Turners	9.88	17	.77	33.85	.954	1.991	.201
Watchmen	11.15	24	1.08	38.52	1.086	1.605	.143
Yardmen	10	13	.59	23.77	.670	1.828	.182
Total and average..	9.05	2,21	100.00	$3,546.04	100.00	$1.597	$0.160
Male	9.95	2,216	99.77	$3,541.94	99.885	$1.598	$0.160
Female	10	5	.23	4.10	.115	.82	.082
Bookkeeper	8	1	2.22	$1.00	.880	$1.00	$0.125
Bookkeeper, female	10	1	2.22	1.50	1.320	1.50	.150
Designer	10	1	2.22	2.58	2.270	2.58	.258
Draughtsman	9	1	2.22	2.00	1.760	2.00	.222
Foremen	10	33	73.34	90.26	79.460	2.735	.273
Shipping clerks, helper...	10	1	2.22	1.50	1.320	1.50	.150
Tallyman	10	1	2.22	2.00	1.760	2.00	.200
Total and average..	9.93	45	100.00	$113.59	100.000	$2.524	$0.254
Male	9.93	44	97.78	$112.09	98.68	$2.547	$0.256
Female	10	1	2.22	1.50	1.32	1.50	.150

Table B—Showing number of persons, male and female, and total number and proportion in each class of employes, classified by weekly earnings received, together with the average wage per day received in each class and the total number of persons employed by months and the range of employment for *all* establishments reporting either as to wages and employes, in detail, or classified weekly earnings.

CLASSIFICATION OF WEEKLY EARNINGS.					AVERAGE WAGES PER DAY.			NO. PERSONS EMP. BY MONTH.		
Classification.	No. of Persons.			Per cent						
	Male.	Female.	Total		Male.	Female.	Total	Month	No.	Range.
Under $5 00..	311	5	316	9 14	$.635	$.75	$.638	Jan.	2 830	84.61
$ 5 00 but under 6 00..	119	...	140	4.31	.872	......	.872	Feb...	3,114	93.10
6 00 but under 7 00..	225	1	226	6.54	1.023	1.10	1.023	Mar..	3,211	96.00
7 00 but under 8 00.	219	......	219	6.34	1.252	.. ..	1.252	April.	3,276	97.95
8 00 but under 9 00..	267	......	267	7.73	1.368	....	1.368	May..	3.349	100.00
9 00 but under 10 00..	907	1	908	26.27	1.513	1.50	1.513	June..	3,332	96.61
10 00 but under 12 00 .	587	......	587	16.95	1.775	....	1.775	July..	3,341	99.89
12 00 but under 15 00	566	....	566	16.38	2.118	....	2.118	Aug..	3.325	99.41
15 00 but under 20 00	193	......	193	5.59	2.693	......	2.693	Sept.	3,343	99.95
20 00 and over. ..	26	....	26	.75	3.888	...	3.888	Oct..	3,323	99.35
								Nov..	3,228	99.50
Total....	3,450	7	3,457	100.00	$1.617	$ 933	$1.615	Dec..	3,271	97.80
								Ave...	3,254	97.29

SHEET METAL—18 ESTABLISHMENTS.

Table A—Showing by occupation, classes, hours of work per day, number and proportion of persons employed, total wages and proportion of wages paid and average wages per day and per hour in each occupation for that portion of the industry reporting employes in detail.

Occupation.	Average hours per day.	Persons.		Wages.			
		Number.	Per cent.	Total per day.	Per cent.	Average.	
						Per day.	Per hour.
Boys	9.33	6	.530	$4.53	.287	$0.755	$0.060
Buffers	10	3	.265	6.00	.381	2.000	.200
Carpenters	10	4	.353	7.85	.435	1.962	.196
Cornice makers	8	12	1.060	35.56	2.259	2.963	.370
Electrician	10	1	.088	2.50	.158	2.500	.250
Enamelers	10	80	7.067	132.10	8.393	1.651	.165
Enamelers' helpers	10	6	.530	7.50	.412	1.250	.125
Enameler's helpers, female	10	126	11.130	87.15	5.537	.691	.069
Engineers	10	3	.265	7.60	.419	2.533	.253
Firemen	10	2	.176	4.00	.254	2.000	.200
Finishers	10	4	.353	6.00	.381	1.500	.150
Finishers, female	10	50	4.416	37.50	2.382	.750	.075
Galvanizers	10	25	2.207	38.50	2.446	1.540	.154
Helpers	9.94	76	6.713	113.71	7.224	1.496	.150
Jacket makers	10	5	.441	5.00	.317	1.000	.100
Japanners	10	7	.618	12.25	.778	1.750	.175
Japanners, female	10	11	.971	11.00	.698	1.000	.100
Laborers	10	189	16.696	245.35	15.588	1.298	.129
Laborers, female	10	17	1.501	9.15	.581	.538	.053
Machinists	10	51	4.505	140.35	8.917	2.751	.275
Machinists, helpers	10	12	1.060	12.17	.773	1.014	.101
Machine tenders	10	110	9.717	133.50	8.418	1.213	.121
Moulders	10	30	2.650	64.75	4.113	2.158	.215
Packers	10	2	.176	1.75	.111	.875	.087
Pressmen	10	6	.530	5.78	.367	.963	.096
Roofers	8	6	.530	15.60	.991	2.600	.325
Retinners	10	25	2.207	38.50	2.446	1.540	.154
Retinners' helpers, female	10	15	1.325	11.25	.714	.750	.075
Sheet metal workers	10	41	3.621	92.00	5.845	2.243	.224
Slater	8	1	.088	3.34	.212	3.340	.417
Solderers, female	10	51	4.505	42.06	2.672	.824	.082
Teamsters	12	2	.176	3.50	.222	1.750	.145
Tester	10	1	.088	1.25	.079	1.250	.125
Tinners	9.75	99	8.745	183.35	11.649	1.852	.189
Tinners' helpers	9.92	50	4.416	45.50	2.890	.910	.091
Watchmen	10	3	.265	6.00	.381	2.000	.200
Total and average	9.93	1.132	100.000	$1,573.90	100.000	$1.302	$0.131
Male	9.92	862	76.15	$1,375.79	87.413	$1.596	60.160
Female	10	270	23.[illegible]	198.11	12.587	.734	.073
Foremen	10	24	96.00	$62.50	97.277	$2.604	$0.260
Shipper	10	1	4.00	1.75	2.723	1.750	.175
Total and average	10	25	100.00	$64.25	100.000	$2.570	$0.257

Table B—Showing number of persons, male and female, and total number and proportion in each class of employes, classified by weekly earnings received, together with the average wage per day received in each class and the total number of persons employed by months and the range of employment for *all* establishments reporting either as to wages and employes, in detail, or classified weekly earnings.

Classification of Weekly Earnings.					Average Wages Per Day.			No. Persons Emp. by Month.		
Classification.	No of Persons.			Per cent.						
	Male.	Female.	Total		Male.	Female.	Total	Month.	No.	Range.
Under $5 00	599	241	840	35.88	$.723	$ 702	$.708	Jan...	2,159	91.5
$ 5 00 but under 6 00	204	1	205	8.76	.877	.90	880	Feb ..	2,257	95.6
6 00 but under 7 00	178	28	206	8.80	1.049	1.00	1.03	Mar ..	2,284	97.0
7 00 but under 8 00	232	......	232	9.91	1.19	......	1.19	Apr...	2,286	96.9
8 00 but under 9 00	153	......	153	6.54	1.371	.....	1.371	May ..	2,333	98.9
9 00 but under 10 00	271	.. ..	271	11.58	1.530	......	1.530	June..	2,346	99.4
10 00 but under 12 00	170	.....	170	7.26	1.757	.....	1.757	July ..	2,355	100.00
12 00 but under 15 00	109	......	109	4.65	2,053	.. ..	2.053	Aug ..	2,342	99.3
15 00 but under 20 00	144	..	144	6.15	2.706	......	2.706	Sept..	2,289	97.1
20 and over	11	......	11	.47	3.871	......	3.871	Oct...	2,254	93.3
								Nov ..	2,042	86.6
Total................	2,071	270	2,341	100.00	$1.623	$.733	$1.415	Dec ..	1,924	83.5
								Ave...	2,240	94 9

SHIPS AND BOATS—6 ESTABLISHMENTS.

Table A—Showing by occupation, classes, hours of work per day, number and proportion of persons employed, total wages and proportion of wages paid and average wages per day and per hour in each occupation for that portion of the industry reporting employes in detail.

Occupation	Average hours per day.	Persons.		Wages.			
		Number.	Per cent.	Total per day	Per cent	Average.	
						Per day.	Per hour.
Blacksmiths	10	3	.64	$9.50	.902	$3.167	$0.316
Carpenters	10	172	36.77	484.25	45.982	2.815	.281
Craneman	12	1	.21	3.50	.332	3.500	.291
Deck hands	12	8	1.70	18.65	1.770	2.331	.194
Engineers	10.40	10	2.14	37.07	3.520	3.707	.356
Firemen	10.33	6	1.28	11.25	1.068	1.875	.181
Helpers	10	14	2.99	24.00	2.278	1.714	.171
Laborers	10	158	33.76	293.90	27.907	1.861	.186
Leaders	10	5	1.07	11.25	1.068	2.250	.225
Linemen	10	5	1.07	11.25	1.068	2.25	.225
Machinists	10	4	.85	11.50	1.091	2.875	.287
Painters	10	43	9.19	77.25	7.335	1.796	.179
Plumber	10	1	.21	3.00	.293	3.00	.300
Scrubbers	10	32	6.84	44.00	4.177	1.375	.137
Watchmen	10.66	3	.64	6.00	.569	2.00	.187
Wood workers	10	3	.64	6.75	.640	2.25	.225
Total and average..	10.05	468	100.00	$1,053.12	100.000	$2.25	$0.223
Captain	12	1	4.76	$4.50	7.23	$4.50	$0.375
Foremen	10	13	61.91	46.75	75.10	3.596	.359
Stewards	10	7	33.33	11.00	17.67	1.571	.157
Total and average..	10.60	21	100.00	$62.25	100.00	$2.964	$0.279

Table B—Showing number of persons, male and female, and total number and proportion in each class of employes, classified by weekly earnings received, together with the average wage per day received in each class and the total number of persons employed by months and the range of employment for *all* establishments reporting either as to wages and employes, in detail, or classified weekly earnings.

CLASSIFICATION OF WEEKLY EARNINGS.					AVERAGE WAGES PER DAY.			NO. PERSONS EMP. BY MONTH.		
Classification.	No. of Persons.			Per cent.						
	Male.	Female.	Total		Male	Female.	Total	Month.	No.	Range.
Under $5 00	....	......	......	.....	......	......	......	Jan...	1,176	63.33
$ 5 00 but under 6 00	18	......	18	.89	$.896	....	$.896	Feb...	1,494	80.45
6 00 but under 7 00	68	......	68	3.37	1.000	.. ..	1.000	Mar.	1,813	97.60
7 00 but under 8 00	59	....	59	2,92	1.250	......	1.250	April.	1,712	92.19
8 00 but under 9 00	....	......	...		......	....	....	May..	1,751	92.29
9 00 but under 10 00	187	....	187	9.28	1.500	...	1.500	June..	1,857	100.00
10 00 but under 12 00	671	....	671	33.31	1.754	......	1.754	July..	988	53.20
12 00 but under 15 00	394	......	394	19.56	2.142	......	2.142	Aug...	983	52.93
15 00 but under 20 00	474	....	474	23.57	2.848	......	2.848	Sept..	890	47.93
20 00 and over	143	.. ...	143	7.10	4.095	......	4.095	Oct...	840	45.23
								Nov.	908	48.89
Total	2,014	......	2,014	100.00	$2.280	......	$2 280	Dec...	942	50.73
								Ave...	1,280	68.93

SOAP—9 ESTABLISHMENTS.

Table A—Showing by occupation, classes, hours of work per day, number and proportion of persons employed, total wages and proportion of wages paid and average wages per day and per hour in each occupation for that portion of the industry reporting employes in detail.

OCCUPATION.	Average hours per day.	PERSONS.		WAGES.			
		Number.	Per cent.	Total per day.	Per cent.	Average.	
						Per day.	Per hour.
Cake packers	10	5	3.73	$7.50	3.330	$1.500	$0.150
Cake stoppers	10	3	2.25	4.80	2.131	1.600	.160
Coopers	9.57	7	5.22	13.85	6.149	1.978	.206
Drivers	10	2	1.50	6.00	2.664	3.000	.300
Engineers	10.12	4	2.98	8.30	3.684	2.075	.205
Fireman	10	1	.74	1.50	.666	1.500	.150
Helpers	9.33	6	4.48	8.51	3.778	1.418	.151
Helpers, female	10	17	12.68	10.49	4.634	.614	.061
Laborers	9.47	70	52.24	122.83	54.531	1.743	.184
Machinists	9.83	3	2.24	9.92	4.404	3.306	.336
Moulders	10	5	3.73	7.50	3.330	1.500	.150
Pressmen	10	4	2.98	7.40	3.285	1.850	.150
Soap makers	9.33	3	2.25	9.16	4.066	3.053	.327
Soap wrapper	10	1	.74	2.00	.888	2.000	.20
Teamsters	9.25	2	1.50	3.04	1.350	1.520	.164
Warehouse man	9.50	1	74	2.50	1.100	2.500	.263
Total and average	9.64	134	100.00	$225.25	100.000	$1.681	$0.174
Male	9.59	117	87.32	$214.81	95.365	$1.836	$0.191
Female	10	17	12.68	10.44	4.635	.614	.061
Bookkeepers, female	8.25	2	25.00	$2.25	13.433	$1.125	$0.138
Foreman	10	1	12.50	3.50	20.894	3.500	.350
Manager	8.50	1	12.50	3.25	19.403	3.250	.382
Salesmen	8.50	3	37.50	6.75	40.299	2.250	.264
Stenographer, female	8.50	1	12.50	1.00	5.971	1.000	.117
Total and average	8.625	8	100.00	$16.75	100.000	$2.094	$0.242
Male	8.80	5	62.50	$13.50	80.597	$2.70	$0.306
Female	8.33	3	37.50	3.25	19.403	1.083	.130

Table B—Showing number of persons, male and female, and total number and proportion in each class of employes, classified by weekly earnings received, together with the average wage per day received in each class and the total number of persons employed by months and the range of employment for *all* establishments reporting either as to wages and employes, in detail, or classified weekly earnings.

Classification of Weekly Earnings.					Average Wages Per Day.			No. Persons Emp. by Month.		
Classification.	No. of Persons.			Per cent.						
	Male.	Female.	Total		Male.	Female.	Total	Month.	No.	Range.
Under $5 00..	3	42	45	25.57	$.79	$.614	$.632	Jan.	142	92.21
$ 5 00 but under 6 00	.. .	.....	......	.. ...	.....	......	. . .	Feb ..	142	92.21
6 00 but under 7 00..	1	2	3	1.71	1.00	1.00	1 00	Mar...	138	89.61
7 00 but under 8 00..	4	1	5	2.84	1.19	1.25	1.205	April .	144	93.51
8 00 but under 9 00 .	.....	......	......	.. ..	......	......	......	May..	135	87.66
9 00 but under 10 00..	32	......	32	18.18	1.52	......	1.52	June .	137	88.96
10 00 but under 12 00..	37	......	37	21.02	1.411	......	1.411	July..	136	88.31
12 00 bus under 15 00..	40	.....	40	22.73	2.027	... ..	2.027	Aug ..	134	87.01
15 00 but under 20 00..	11	......	11	6.25	2.81	......	2.81	Sept..	132	85.71
20 00 and over....	3	......	3	1.70	3.64	......	3.64	Oct...	146	94.81
								Nov ..	153	99.33
Total..............	131	45	176	100.00	$1.871	$.684	$1.704	Dec ..	154	100.00
								Ave...	141	91.55

STAVES AND HEADING—5 ESTABLISHMENTS.

Table A—Showing by occupation, classes, hours of work per day, number and proportion of persons employed, total wages and proportion of wages paid and average wages per day and per hour in each occupation for that portion of the industry reporting employes in detail.

Occupation.	Average hours per day.	Persons.		Wages.			
		Number.	Per cent.	Total per day.	Per cent.	Average.	
						Per day.	Per hour.
Bolter	9	1	.67	$2.50	1.104	$2.50	$0.277
Cutter	9	1	.67	3.50	1.546	3.50	.388
Engineer	10	1	.67	3.00	1.325	3.00	.300
Filers	9.50	2	1.35	6.50	2.872	3.25	.342
Finishers	10	3	2.02	5.25	2.320	1.75	.175
Firemen	11.25	8	5.36	14.50	6.409	1.812	.161
Helpers	12	13	8.72	13.40	5.921	1.03	.085
Laborers	9.70	75	50.34	104.35	46.113	1.391	.143
Machine hands	10	43	28.85	69.80	30.844	1.623	.162
Sawyers	10	2	1.35	3.50	1.546	1.75	.175
Total and average..	10.07	149	100.00	$266:30	100.000	$1.519	$0.150

Table B—Showing number of persons, male and female, and total number and proportion in each class of employes, classified by weekly earnings received, together with the average wage per day received in each class and the total number of persons employed by months and the range of employment for *all* establishments reporting either as to wages and employes, in detail, or classified weekly earnings.

Classification of Weekly Earnings.					Average Wages Per Day.			No. Persons Emp. by Month.		
Classification.	No. of Persons.			Per cent.						
	Male	Female.	Total		Male.	Female	Total	Month.	No.	Range.
Under $5 00..	4	......	4	2.68	$.75	.....	.75	Jan .	146	90.68
$ 5 00 but under 6 00..	2	......	2	1.35	.85	......	.85	Feb...	161	100.00
6 00 but under 7 00 .	11	......	11	7.39	1.00	......	1.00	Mar ..	161	100.00
7 0 but under 8 00..	4	....	4	2.68	1.25	......	1.25	April.	133	82.67
8 00 but under 9 00 .	27	....	27	18.12	1.35	......	1.35	May. .	140	86.96
9 00 but under 10 00..	72	......	72	48.32	1.52	......	1.52	June .	146	90.68
10 00 but under 12 00..	19	....	19	12.75	1.75	.....	1.75	July ..	126	78.26
12 00 but under 15 00..	4	.... ..	4	2.68	2.00	......	2.00	Aug...	84	52.17
15 00 but under 20 00..	4	......	4	2.68	2.85	......	2.85	Sept ..	73	45.34
20 00 and over...	2	......	2	1.35	3.50	....	3.50	Oct...	75	46.58
								Nov...	95	52.80
Total	149	......	149	100.00	$1.519	......	$1.519	Dec ..	115	71.43
								Ave...	121	75.16

STONE—19 ESTABLISHMENTS.

Table A—Showing by occupation, classes, hours of work per day, number and proportion of persons employed, total wages and proportion of wages paid and average wages per day and per hour in each occupation for that portion of the industry reporting employes in detail.

Occupation.	Average hours per day.	Persons.		Wages.			
		Number.	Per cent.	Total per day.	Per cent.	Average.	
						Per day.	Per hour.
Blacksmiths	9	9	2.400	$25.75	2.871	$2.161	$0.317
Carpenters	8	20	5.333	52.00	5.797	2.600	.325
Electrician	9	1	.267	2.00	.223	2.000	.222
Engineers	9.50	8	2.133	19.88	2.216	2.485	.261
Laborers	9.75	70	18.667	122.49	13.656	1.749	.179
Letterers	10	3	.800	8.25	.920	2.750	.275
Machine hands	8.65	49	13.067	117.50	13.100	2.397	.277
Machine helpers	9.50	10	2.667	18.25	2.035	1.825	.192
Masons	8	20	5.333	60.00	6.689	3.000	.375
Polishers	9.11	17	4.534	28.75	3.205	1.691	.185
Quarrymen	9.27	62	16.534	120.25	13.406	1.939	.209
Roofers	10	10	2.666	24.75	2.759	2.475	.247
Roofers' helpers	10	7	1.867	14.00	1.561	2.000	.200
Sawyer	10	1	.266	2.10	.234	2.100	.210
Seiners	8	4	1.067	12.00	1.338	3.000	.375
Stone cutters	8.78	76	20.267	250.50	27.927	3.296	.366
Teamsters	9	4	1.066	7.50	.836	1.875	.208
Trimmers and fitters	10	4	1.066	11.00	1.227	2.750	.275
Total and average..	9.06	375	100.000	$896.97	100.000	$2.392	$0.264
Foremen	10	2	100.000	$4.33	100.000	$2.165	$0.216

Table B—Showing number of persons, male and female, and total number and proportion in each class of employes, classified by weekly earnings received, together with the average wage per day received in each class and the total number of persons employed by months and the range of employment for *all* establishments reporting either as to wages and employes, in detail, or classified weekly earnings.

Classification of Weekly Earnings.					Average Wages Per Day.			No. Persons Emp. by Month.		
Classification.	No. of Persons.			Per cent						
	Male	Female.	Total		Male.	Female.	Total	Month.	No.	Range.
Under $5 00..	2	.....	2	.27	$.75	......	$.75	Jan .	485	65.6
$ 5 00 but under 6 00 .	2	.....	2	.27	.90	......	.90	Feb ..	485	65.6
6 00 but under 7 00	12	.....	12	1.62	1.00	......	1 00	Mar...	541	73.2
7 00 but under 8 00	3	......	3	.41	1.25	......	1.25	April .	634	85.9
8 00 but under 9 00..	2	......	2	.27	1.45	......	1.45	May...	700	94.8
9 00 but under 10 00	105	......	105	14.21	1.551	......	2.551	June..	702	95.0
10 00 but under 12 00	153	......	153	20.70	1.751	......	1.751	July..	710	96.1
12 00 but under 15 00	187	......	187	25 31	2.157	......	2.157	Aug .	710	96.1
15 00 but under 20 00 .	220	....	220	29.77	2.845	......	2 845	Sept	715	97.4
20 00 and over	53	......	53	717	3.757	......	3.757	Oct...	737	100.0
								Nov.	662	89.7
Total	739	......	739	100.00	$2.391	......	$2.391	Dec .	482	65.2
								Ave...	690	85.3

STRUCTURAL IRON—7 ESTABLISHMENTS.

Table A—Showing by occupation, classes, hours of work per day, number and proportion of persons employed, total wages and proportion of wages paid and average wages per day and per hour in each occupation for that portion of the industry reporting employes in detail.

Occupation.	Average hours per day.	Persons.		Wages.			
		Number.	Per cent.	Total per day.	Per cent.	Average	
						Per day.	Per hour.
Apprentice	10	1	.18	$1.25	.122	$1.250	$0.125
Blacksmiths	10	6	1.05	18.75	1.838	3.125	.312
Blacksmiths' helpers	10	5	.88	9.50	.932	1.900	.190
Boys	10	18	3.17	30.90	3.031	1.716	.171
Carpenters	10	2	.35	4.50	.442	2.250	.225
Engineers	10	2	.35	5.50	.539	2.75	.275
Erectors	8	2	.35	7.20	.706	3.60	.450
Finishers	10	22	3.88	41.00	4.022	1.863	.186
Fireman	10.50	1	.18	1.75	.172	1.75	.166
Fitters	10	56	9.87	104.05	10.205	1.857	.185
Fitters' helpers	10	30	5.29	40.35	3.957	1.343	.134
Iron workers	10	8	1.41	19.55	1.918	2.443	.244
Laborers	10	158	27.87	271.75	26.652	1.719	.171
Machine hands	10	23	4.06	46.45	4.556	2.02	.202
Machinists	10	26	4.59	59.60	5.845	2.253	.225
Oiler	10	1	.18	1.40	.138	1.40	.140
Packer	10	1	.18	2.00	.196	2.00	.200
Packers, female	10	5	.88	2.50	.245	.50	.050
Packers' helpers	10	2	.35	3.40	.334	1.70	.17
Painters	10	22	3.88	42.95	4.213	1.952	.195
Press hands	10	20	3.53	28.70	2.814	1.435	.143
Press hands, female	10	9	1.59	6.39	.626	.71	.071
Punchers	10	26	4.59	51.20	5.022	1.969	.196
Punchers' helpers	10	25	4.41	42.80	4.198	1.712	.171
Rivetors	10	56	9.88	93.75	9.194	1.674	.167
Rolling mill hands	10	9	1.59	17.10	1.677	1.90	.190

STRUCTURAL IRON—Continued.

OCCUPATION.	Average hours per day.	PERSONS.		WAGES.			
						Average.	
		Number.	Per cent.	Total per day.	Per cent.	Per day.	Per hour.
Sorters, female	10	2	.35	1.50	.148	.75	.075
Teamsters	10	3	.53	5.15	.506	1.717	.171
Templaters	10	12	2.12	28.70	2.814	2.392	.239
Tool setter	10	1	.18	1.70	.167	1.70	.170
Turners	11	3	.53	7.10	.697	2.367	.215
Unloaders	10	8	1.41	17.70	1.736	2.212	.221
Watchmen	12	2	.35	3.45	.338	1.725	.143
Total and average..	10.06	567	100.00	$1,019.59	100.000	$1.798	$0.178
Male	10.06	551	97.18	$1,009.20	98.981	$1.832	$0.182
Female	10	16	2.82	10.39	1.019	.649	.064
Draughtsman	10	1	100.00	$3.00	100.00	$3.00	$0.300

Table B—Showing number of persons, male and female, and total number and proportion in each class of employes, classified by weekly earnings received, together with the average wage per day received in each class and the total number of persons employed by months and the range of employment for *all* establishments reporting either as to wages and employes, in detail, or classified weekly earnings.

CLASSIFICATION OF WEEKLY EARNINGS.					AVERAGE WAGES PER DAY.			NO. PERSONS EMP. BY MONTH.		
Classification.	No. of Persons.			Per cent.						
	Male.	Female	Total		Male	Female.	Total	Month.	No.	Range.
Under $5 00	14	17	31	3.47	$ 686	$.649	$.665	Jan ..	975	100.00
$ 5 00 but under 6 00..	22	......	22	2.46	.875	......	.875	Feb.	895	92.82
6 00 but under 7 00..	28	.....	28	3.13	1.036	.....	1.036	Mar ..	886	91.79
7 00 but under 8 00..	30	......	30	3.36	1.250	....	1.250	April..	882	90.47
8 00 but under 9 00..	156	......	156	17.45	1.375	....	1.375	May. .	917	94.10
9 00 but under 10 00..	158	.....	158	17.67	1.670	......	1.670	June.	872	89.45
10 00 but under 12 00	256	......	256	28.63	1.970	....	1.970	July ..	837	85.85
12 00 but under 15 00..	136	......	136	15.21	2.125	....	2.125	Aug...	841	86.26
15 00 but under 20 00 .	60	.....	60	6.72	2.742	....	2.742	Sept ..	859	88.10
20 00 and over.	17	......	17	1.90	3.700	......	3 700	Oct ...	900	92.31
								Nov ..	866	88.82
Total........	877	17	894	100.00	1 831	$.619	$1.800	Dec ..	840	86.15
								Ave...	881	91.38

TOBACCO WAREHOUSES—5 ESTABLISHMENTS.

Table A—Showing by occupation, classes, hours of work per day, number and proportion of persons employed, total wages and proportion of wages paid and average wages per day and per hour in each occupation for that portion of the industry reporting employes in detail.

OCCUPATION.	Average hours per day.	PERSONS.		WAGES.			
		Number.	Per cent.	Total per day.	Per cent.	Average.	
						Per day.	Per hour.
Engineers	8	4	1.18	$7.51	1.749	$1.877	$0.234
Handlers	10	6	1.77	5.50	1.281	.916	.091
Helpers	8	7	2.06	8.74	2.036	1.248	.156
Laborers	8	39	11.50	77.67	18.092	1.991	.249
Machinist	8	1	.30	3.33	.776	3.33	.416
Packers	10	8	2.36	16.00	3.727	2.00	.200
Packers, female	8	86	25.37	75.81	17.659	.881	.110
Printers	8	5	1.48	9.49	2.211	1.898	.237
Sorters	9.34	61	17.99	87.05	20.277	1.427	.152
Sorters, female	9.19	87	25.66	100.40	25.483	1.257	.136
Stemmers, female	9.50	25	7.38	16.30	3.797	.652	.068
Strippers	8	8	2.36	8.00	1.864	1.00	.125
Teamsters	8	2	.59	4.50	1.048	2.25	.281
Total and average..	8.74	339	100.00	$420.30	100.000	$1.240	$0.141
Male	8.78	141	41.59	$227.79	53.06	$1.615	$0.181.
Female	8.71	198	58.41	192.51	46.94	.972	.111
Foremen	9	4	66.67	$12.66	82.637	$3.165	$0.351
Foreladies	8	2	33.33	2.66	17.363	1.330	.166
Total and average..	8.7	6	100.00	$15.32	100.000	$2.553	$0.293
Male	9	4	66.67	$12.66	82.637	$3.165	$0.351
Female	8	2	33.33	2.66	17.363	1.33	.166

Table B—Showing number of persons, male and female, and total number and proportion in each class of employes, classified by weekly earnings received, together with the average wage per day received in each class and the total number of persons employed by months and the range of employment for *all* establishments reporting either as to wages and employes, in detail, or classified weekly earnings.

CLASSIFICATION OF WEEKLY EARNINGS.					AVERAGE WAGES PER DAY.			NO. PERSONS EMP. BY MONTH.		
Classification.	No. of Persons.			Per cent.						
	Male	Female.	Total		Male.	Female.	Total	Month	No.	Range.
Under $5 00..	2	77	79	22.90	$.75	$.725	$.726	Jan...	368	99.73
$ 5 00 but under 6 00 .	1	2	3	.87	.90	.90	.90	Feb ..	369	100.00
6 00 but under 7 00..	21	46	67	19.42	1.019	1.002	1.007	Mar ..	335	90.79
7 00 but under 8 00 .	12	74	86	24.93	1.27	1.252	1.254	April..	250	67.75
8 00 but under 9 00..	....	......	......		......	......	.....	May ..	213	57.72
9 00 but under 10 00	44	..	44	12.75	1.50	.....	1.50	June..	187	50.68
10 00 but under 12 00..	21	1	22	6.37	1.75	1.75	1.75	July .	191	51.76
12 00 but under 15 00	37	.....	37	10.73	2.071	......	2.071	Aug..	195	52.85
15 00 but under 20 00..	6	.....	6	1.74	2.86	....	2.86	Sept	201	54.47
20 00 and over	1	......	1	.29	4.83	......	4.83	Oct.	187	50 68
								Nov ..	186	50.41
Total...............	145	200	345	100.00	$1.658	$.976	$1.262	Dec..	168	42.82
								Ave ..	238	64.50

TRUNKS AND VALISES—6 ESTABLISHMENTS.

Table A—Showing by occupation, classes, hours of work per day, number and proportion of persons employed, total wages and proportion of wages paid and average wages per day and per hour in each occupation for that portion of the industry reporting employes in detail.

OCCUPATION.	Average hours per day.	PERSONS.		WAGES.			
		Number.	Per cent.	Total per day.	Per cent.	Average.	
						Per day.	Per hour.
Apprentices	10	6	2.598	$5.75	1.687	$0.958	$0.096
Box nailers	10	4	1.732	8.25	2.422	2.062	.206
Cutters	10	2	.865	4.75	1.394	2.375	.237
Engineer	10	1	.433	2.25	.659	2.25	.225
Finishers	10	15	6.493	30.26	8.877	2.017	.201
Framer	10	1	.433	2.00	.587	2.00	.200
Helpers	10	2	.865	2.50	.733	1.25	.125
Liners, female	10	8	3.464	8.25	2.421	1.031	.109
Piece workers	10	3	1.299	4.50	1.319	1.50	.150
Sawyers	10	2	.865	5.00	1.466	2.50	.250
Stitcher	10	1	.433	2.50	.733	2.50	.250
Teamsters	10	3	1.299	4.75	1.394	1.583	.158
Telescope makers, female	10	2	.865	1.80	.528	.90	.090
Trunk and bag workers	10	129	55.844	209.40	61.421	1.623	.162
Trunk and bag workers, female	10	45	19.481	36.70	10.766	.815	.081
Trunk packer	10	1	.433	2.00	.587	2.00	.200
Wood workers	10	6	2.598	10.25	3.007	1.708	.170
Total and average	10	231	100.000	$340.91	100.000	$1.475	$0.147
Male	10	176	76.19	$294.16	86.287	$1.671	$0.167
Female	10	55	23.81	46.75	13.713	.85	.085

Table B—Showing number of persons, male and female, and total number and proportion in each class of employes, classified by weekly earnings received, together with the average wage per day received in each class and the total number of persons employed by months and the range of employment for *all* establishments reporting either as to wages and employes, in detail, or classified weekly earnings.

CLASSIFICATION OF WEEKLY WAGES.					AVERAGE WAGES PER DAY.			NO. PERSONS EMP. BY MONTH.		
Classification.	No. of Persons.			Per cent.						
	Male.	Female.	Total		Male	Female.	Total	Month.	No.	Range.
Under $5 00	24	64	88	22.39	$.75	$.751	$.751	Jan...	376	93.25
$ 5 00 but under 6 00	9	14	23	5.85	.90	.900	.900	Feb ..	369	91.51
6 00 but under 7 00..	40	26	66	16.79	1.078	1.000	1.048	Mar ..	362	89.78
7 00 but under 8 00	29	4	33	8.40	1.250	1.250	1.250	Apr ..	355	88.04
8 00 but under 9 00	21	......	21	5.34	1.400	......	1.400	May ..	347	82.06
9 00 but under 10 00..	47	......	47	11.96	1.581	....	1.581	June .	234	58.03
10 00 but under 12 00	46	......	46	11.71	1.758	..	1.758	July	267	66.21
12 00 but under 15 00	52	.. ..	52	13.23	2.131	.....	2.131	Aug ..	366	90.77
15 00 but under 20 00	17	......	17	4.33	2.730	.... .	2.730	Sept .	371	92,01
20 00 and over	.....	....	....	....	.....	...	....	Oct...	379	93.99
								Nov ..	402	100.00
Total	285	108	393	100.00	1.671	.85	1.475	Dec ..	399	98.95
								Ave...	352	87.30

VENEER—5 ESTABLISHMENTS.

Table A—Showing by occupation, classes, hours of work per day, number and proportion of persons employed, total wages and proportion of wages paid and average wages per day and per hour in each occupation for that portion of the industry reporting employes in detail.

OCCUPATION.	Average hour per day.	PERSONS.		WAGES.			
		Number.	Per cent.	Total per day.	Per cent.	Average.	
						Per day.	Per hour.
Engineers	10	2	2.99	$4.00	3.988	$2.00	$0.200
Firemen	10	2	2.99	3.50	3.489	1.75	.175
Laborers	10	53	79.10	75.30	75.075	1.42	.142
Machine tenders	10	10	14.92	17.50	17.448	1.75	.175
Total and average..	10	67	100.00	$100.30	100.00	$1.497	$0.149
Foreman	10	1	100.00	$2.75	100.00	$2.75	$0.275

Table B—Showing number of persons, male and female, and total number and proportion in each class of employes, classified by weekly earnings received, together with the average wage per day received in each class and the total number of persons employed by months and the range of employment for *all* establishments reporting either as to wages and employes, in detail, or classified weekly earnings.

CLASSIFICATION OF WEEKLY EARNINGS.					AVERAGE WAGES PER DAY.			NO. PERSONS EMP. BY MONTH.		
Classification.	No of Persons.			Per cent.						
	Male	Female.	Total		Male.	Female	Total	Month	No.	Range
Under $5 00..	30	......	30	6.28	$.75	......	$.75	Jan...	347	71.84
$ 5 00 but under 6 00 .	11	.. ..	11	2.30	85	......	.85	Feb ..	354	73.29
6 00 but under 7 00 .	53	......	53	11.09	1.00	...	1.00	Mar ..	382	79.07
7 00 but under 8 00 .	21	......	21	4.39	1.25	......	1.25	April .	431	89.21
8 00 but under 9 00	69	.. ..	69	14.44	1.40	......	1.40	May. .	462	95.44
9 00 but under 10 00 .	180	....	180	37.66	1.518	......	1.518	June .	470	97.10
10 00 but under 12 00..	73	......	73	15.27	1.75	....	1.75	July	483	100 00
12 00 but under 15 00	32	.....	32	6.69	2.00	....	2.00	Aug	448	92.55
15 00 but under 20 00.	8	......	8	1.67	2.75	.....	2.75	Sept.	429	88.82
20 00 and over........	1	.. ..	1	.21	3.50	.. ..	3.50	Oct. .	402	83 23
								Nov ..	374	77.43
Total	478	......	478	100.00	$1.358	......	$1.358	Dec. .	344	71.22
								Ave ..	411	85.09

WAGONS AND CARRIAGES—43 ESTABLISHMENTS.

Table A—Showing by occupation, classes, hours of work per day, number and proportion of persons employed, total wages and proportion of wages paid and average wages per day and per hour in each occupation for that portion of the industry reporting employes in detail.

OCCUPATION.	Average hours per day.	PERSONS.		WAGES.			
		Number.	Per cent.	Total per day.	Per cent.	Average.	
						Per day.	Per hour.
Blacksmiths	9.90	209	13.10	$466.94	14.634	$2.234	$0.225
Blacksmiths' helpers	10	157	9.84	230.77	7.727	1.469	.146
Boys	9.87	16	1.00	12.87	.431	.804	.081
Box makers	10	18	1.13	37.16	1.244	2.064	.206
Carpenters	10	23	1.44	47.16	1.579	2.05	.205
Engineers	10	5	.31	12.00	.402	2.40	.240
Filer	10	1	.06	2.00	.067	2.00	.200
Finishers	10	7	.43	13.25	.444	1.892	.189
Firemen	10	11	.69	18.76	.628	1.705	.170
Laborers	9.94	189	11.84	280.41	9.389	1.483	.149
Machine tenders	10	124	7.77	231.67	7.757	1.868	.186
Machine helpers	10	27	1.69	26.44	.885	.978	.097
Machinists	9.95	46	2.88	86.20	2.886	1.873	.188
Millwright	10	1	.06	3.83	.128	3.83	.383
Moulders	10	4	.25	9.00	.301	2.25	.225
Painters	9.95	283	17.73	637.13	21.332	2.251	.226
Painters, helpers	9.93	15	.94	15.27	.511	1.018	.102
Spring makers	10	11	.69	42.75	1.431	3.613	.361
Spring makers, helpers	10	35	2.20	67.90	2.277	1.94	.194
Steam fitters	10	15	.94	27.30	.911	1.82	.182
Teamsters	10	18	1.13	28.40	.954	1.577	.157
Trimmers	10	76	4.77	130.20	4.360	1.713	.171
Trimmers, female	10	20	1.25	24.50	.820	1.225	.122
Upholsterer	10	1	.06	2.00	.067	2.00	.200
Wagon assemblers	10	20	1.25	35.19	1.178	1.759	.175
Watchmen	10.57	7	.43	12.34	.413	1.762	.166
Wheelwrights	10	37	2.32	77.70	2.601	2.10	.210
Wheelwright's helpers	10	14	.88	18.48	.619	1.22	.122
Wheel makers	10	13	.82	27.30	.911	2.10	.210
Wood workers	9.93	148	9.28	307.10	10.282	2.075	.208
Wood workers, helpers	10	45	2.83	54.70	1.831	1.215	.121
Total and average	9.96	1,596	100.00	$2,986.72	100.000	$1.871	$0.187
Male	9.96	1,576	98.75	$2,962.22	99.176	$1.879	$0.187
Female	10	20	1.25	24.50	.824	1.225	.122
Shipping clerks	10	87	90.63	$143.72	87.490	$1.651	$0.165
Superintendents	10	2	2.08	7.40	4.505	3.70	.370
Time keepers	10	7	7.29	13.15	8.005	1.878	.187
Total and average	10.004	417	100.00	$436.07	100.00	$1.045	$0.104

Table B—Showing number of persons, male and female, and total number and proportion in each class of employes, classified by weekly earnings received, together with the average wage per day received in each class and the total number of persons employed by months and the range of employment for *all* establishments reporting either as to wages and employes, in detail, or classified weekly earnings.

Classification of Weekly Earnings.					Average Wages Per Day.			No. Persons Emp. by Month.		
Classification.	No. of Persons.			Per cent.						
	Male.	Female.	Total		Male.	Female.	Total	Month.	No.	Range.
Under $5 00..	57	14	71	3.25	$.731	$.775	$.732	Jan...	2,057	98.61
$ 5 00 but under 6 00..	29	2	31	1.42	.90	.90	.90	Feb...	2,032	97.40
6 00 but under 7 00..	97	7	104	4.77	1.013	1.066	1.018	Mar	2,086	100.00
7 00 but under 8 00	145	4	149	6.83	1.244	1.237	1.244	April..	2,063	98.90
8 00 but under 9 00 .	150	4	154	7.06	1.394	1.40	1.395	May..	2,059	98.71
9 00 but under 10 00..	519	4	523	23.97	1.506	1.50	1.506	June..	2,003	96.02
10 00 but under 12 00..	320	....	320	14 66	1.758	....	1.758	July..	1,974	94.15
12 00 but under 15 00..	523	....	523	23.97	2.142	......	2.142	Aug...	1,914	91.75
15 00 but under 20 00..	279	......	279	12.79	2.66	.....	2.66	Sept..	1,916	91.85
20 00 and over	28	......	28	1.28	3.999	.....	3 999	Oct...	1,915	91.80
								Nov...	1,957	93.86
Total	2,147	35	2,182	100.00	$1.870	$1.225	$1.862	Dec...	1,832	87.82
								Ave...	1,984	95.11

WOODENWARE—10 ESTABLISHMENTS.

Table A—Showing by occupation, classes, hours of work per day, number and proportion of persons employed, total wages and proportion of wages paid and average wages per day and per hour in each occupation for that portion of the industry reporting employes in detail.

Occupation.	Average hours per day.	Persons.		Wages.			
		Number.	Per cent.	Total per day.	Per cent.	Average.	
						Per day.	Per hour.
Carpenters	10	2	4.256	$3.50	3.977	$1.75	$0.175
Engineer	10	1	2.127	1.75	1.989	1.75	.175
Helpers ....,	10	4	8.519	4.00	4.545	1.00	.100
Helper, female	8	1	2.127	.70	.796	.70	.087
Laborers	10	7	14.89	10.00	11.360	1.425	.142
Laborers, female	10	2	4.256	2.00	2.273	1.00	.100
Lathman	10	1	2.127	1.50	1.705	1.50	.150
Pattern makers	9.68	16	34.033	50.12	56.937	3.132	.324
Pattern helpers	9.50	6	12.763	4.45	5.056	.741	.078
Sand belt men	10	2	4.256	3.00	3.409	1.50	.150
Sawyers	10	2	4.256	3.25	3.693	1.625	.162
Tenders	10	3	6.381	3.75	4.260	1.25	.125
Total and average..	9.78	47	100.000	$88.02	100.000	$1.872	$0.191
Male	9.82	44	93.62	$85.25	68.53	$1.937	$0.197
Female	9.33	3	6.38	2.77	31.47	.90	.166

Table B—Showing number of persons, male and female, and total number and proportion in each class of employes, classified by weekly earnings received, together with the average per day received in each class and the total numnumber of persons employed by months and the range of employment for *all* establishments reporting either as to wages and employes, in detail, or classified weekly earnings.

CLASSIFICATION OF WEEKLY EARNINGS.					AVERAGE WAGES PER DAY.			NO. PERSONS EMP. BY MONTH.		
Classification.	No. of Persons.			Per cent.						
	Male.	Female.	Total		Male	Female.	Total	Month.	No.	Range.
Under $5 00..	8	1	9	.783	$.625	$.70	$.64	Jan ..	1,130	99.04
$ 5 00 but under 6 00..	51	....	51	4.537	.95	.....	.95	Feb .	1,141	100.00
6 00 but under 7 00..	12	2	14	1.228	1.00	1.00	1.00	Mar...	1,136	99.56
7 00 but under 8 00..	101	......	101	8.887	1.25	......	1.25	April..	1,057	92.63
8 00 but under 9 00 .	294	......	294	25.680	1.40	......	1.40	May ..	1,073	94.04
9 00 but under 10 00..	320	......	320	27.950	1.50	......	1.50	June..	1,066	93.43
10 00 but under 12 00..	171	......	171	14.977	1.75	......	1.75	July ..	1,040	91.15
12 00 but under 15 00..	109	......	109	9.584	2.10	.....	2.10	Aug'..	1,032	90.45
15 00 but under 20 00..	61	......	61	5.407	2.587	......	2.587	Sept..	1,017	89.13
20 00 and over.	11	......	11	.967	3.479	......	3.479	Oct ...	995	87.20
								Nov ..	980	85.89
Total...............	1,138	3	1,141	100.00	$1.939	$.90	$1.935	Dec...	957	83.98
								Ave...	1,052	92.20

WOOLEN GOODS—8 ESTABLISHMENTS.

Table A—Showing by occupation, classes, hours of work per day, number and proportion of persons employed, total wages and proportion of wages paid and average wages per day and per hour in each occupation for that portion of the industry reporting employes in detail.

OCCUPATION.	Average hours per day.	PERSONS.		WAGES.			
		Number.	Per cent.	Total. per day.		Average.	
						Per day..	Per hour.
Apprentice	10	1	.24	$1.38	.317	$1.38	$0.138
Bobbin carriers, female..	10	2	.48	1.04	.238	.52	.052
Burlers, female	10	3	.72	1.82	.417	.606	.060
Carders	10	2	.48	1.32	.303	.66	.066
Carders, female	10	2	.48	1.32	.303	.66	.066
Carpenter	10	1	.24	2.75	.630	2.75	.275
Caulers	10	3	.72	3.75	.860	1.250	.125
Comber	10	1	.24	.80	.184	.800	.080
Combers, female	10	9	2.15	6.22	1.426	.691	.069
Dresser, female	10	1	.24	1.00	.229	1.00	.100
Drawers, female	10	32	7.67	22.98	5.270	.718	.071
Dyer	10	1	.24	1.50	.344	1.50	.150
Dyer tenders, female	10	2	.48	1.00	.229	.50	.050
Engineers	10	3	.72	5.83	1.337	1.943	.194
Firemen	10	2	.48	3.83	.878	1.915	.191
Helpers	10	10	2.40	13.75	3.153	1.375	.137
Helpers, female	10	22	5.28	14.20	3.256	.645	.064
Laborers	10	56	13.43	71.38	16.369	1.274	.127
Laborers, female	10	13	3.12	13.39	3.071	1.030	.103
Machinists	10	3	72	6.51	1.493	2.17	.217
Machine tenders	10	20	4.79	25.23	5.789	1.261	.126
Machine tenders, female.	10	13	3.12	12.80	2.935	.984	.098
Mill hands	10	5	1.20	4.24	.972	.848	.084
Mill hands, female........	10	4	.96	3.35	.768	.837	.083
Packers	10	3	.72	2.90	.665	.966	.096
Packers, female	10	3	.72	2.55	.585	.850	.085
Shear tender	10	1	.24	1.75	.401	1.750	.175

WOOLEN GOODS—Continued.

OCCUPATION.	Average hours per day.	PERSONS.		WAGES.			
		Number.	Per cent.	Total per day.	Per cent.	Average.	
						Per day.	Per hour.
Sorters	10	9	2.16	16.99	3.896	1.887	.188
Spinners, female	10	47	11.27	25.63	5.878	.545	.054
Spoolers, female	10	12	2.88	7.83	1.681	.610	.061
Twister	10	1	.24	.75	.172	.750	.075
Twisters, female	10	40	9.59	29.14	6.683	.728	.072
Washers and pickers	10	4	.96	6.03	1.385	1.507	.150
Watchmen	10.5	4	.96	5.32	12.20	1.330	.126
Weavers	10	23	5.51	32.19	7.380	1.399	.139
Weavers, female	10	55	13.19	78.72	18.051	1.434	.143
Winders, female	10	2	.48	1.00	.229	.500	.050
Total and average	10.004	417	100.00	$436.07	100.00	$1.045	$0.104
Male	10.01	155	37.17	$212.58	48.749	$1.371	$0.136
Female	10	262	62.83	223.49	51.251	.853	.068
Clerks	10	2	10.00	$3.83	5.757	$1.915	$0.191
Foremen	10	18	90.00	54.94	94.243	3.052	.305
Total, male	10	20	100.00	$58.77	100.000	$2.938	$0.298

Table B—Showing number of persons, male and female, and total number and proportion in each class of employes, classified by weekly earnings received, together with the average per day received in each class and the total number of persons employed by months and the range of employment for *all* establishments reporting either as to wages and employes, in detail, or classified weekly earnings.

CLASSIFICATION OF WEEKLY EARNINGS.					AVERAGE WAGES PER DAY.			NO. PERSONS EMP. BY MONTH.		
Classification	No. of Persons.			Per cent.						
	Male.	Female.	Total		Male.	Female.	Total	Month.	No.	Range.
Under $5 00	22	199	221	41.54	$.741	$.646	$.651	Jan	519	97.19
$ 5 00 but under 6 00	6	8	14	2.63	.875	.915	.895	Feb	509	95 29
6 00 but under 7 00	33	31	64	12.03	1.032	1.047	1.039	Mar	516	96.63
7 00 but under 8 00	31	9	40	7.52	1.224	1.170	1.212	April	505	94.57
8 00 but under 9 00	11	15	26	4.89	1.381	1.380	1.380	May	494	92.51
9 00 but under 10 00	71	39	110	20.68	1.506	1.500	1.504	June	509	95.29
10 00 but under 12 00	20	2	22	4.13	1.782	1.783	1.782	July	522	97.75
12 00 but under 15 00	9	2	11	2.07	2.092	2.092	2.092	Aug	523	97 94
15 00 but under 20 00	19	......	19	3.57	2.741	......	2.741	Sept	533	99.81
20 00 and over	5	......	5	.94	4.540	......	4.590	Oct	528	98.88
								Nov	534	100.00
Total	227	305	532	100.00	$1.550	$.853	$1.132	Dec	524	98.13
								Ave	518	97.00

MISCELLANEOUS—50 ESTABLISHMENTS.

Table A—Showing by occupation, classes, hours of work per day, number and proportion of persons employed, total wages and proportion of wages paid and average wages per day and per hour in each occupation for that portion of the miscellaneous industries reporting employes in detail.

OCCUPATION.	Average hours per day.	PERSONS.		WAGES.			
		Number.	Per cent.	Total. per day.	Per cent.	Average.	
						Per day.	Per hour.
Assemblers	10	9	.45	$15.50	.495	$1.722	$0.172
Bleachers	10	2	.10	2.90	.093	1.450	.145
Box makers	10	7	.35	10.50	.335	1.500	.150
Blockers	10	14	.69	40.25	1.284	2.875	.287
Bottler	10	1	.05	.92	.029	.920	.092
Bottlers, female	10	29	1.44	17.33	.553	.597	.059
Buffers	10	20	1.00	45.00	1.436	2.250	.225
Coffee roasters	10	2	.10	5.50	.176	2.750	.275
Casters	10	5	.25	11.25	.359	2.250	.225
Carpenters	10	14	.69	28.50	.909	2.035	.203
Cupola liner	10	1	.05	2.00	.064	2.000	.200
Charge blowers	10	7	.31	11.20	.357	1.600	.160
Coopers	10	13	.64	23.84	.761	1.834	.183
Carder	10	1	.05	2.50	.080	2.500	.250
Chocolate dippers, female	10	11	.54	8.19	.261	.744	.074
Candy makers	10	9	.45	16.50	.526	1.833	.183
Clay grinder	10	1	.05	1.84	.059	1.840	.184
Dyers	10	3	.15	5.75	.184	1.916	.191
Distillers	10	3	.15	7.51	.240	2.503	.250
Edgers	10	3	.15	7.00	.223	2.333	.233
Enamelers	10	6	.30	15.00	.479	2.500	.250
Elevator men	10	2	.10	2.73	.087	1.365	.136
Drivers	8	4	.20	9.36	.299	2.340	.282
Engineers	9.7	27	1.34	65.15	2.078	2.413	.248
Folders, female	8	21	1.05	21.00	.670	1.000	.125
Felt man	10	1	.05	1.10	.035	1.100	.110
Finishers	10	2	.10	3.50	.112	1.750	.175
Filers	10	4	.20	15.75	.503	3.937	.393
Firemen	10.23	26	1.30	51.92	1.656	1.997	.195
Grinders	10	3	.15	5.13	.164	1.710	.171
Hop collector	10	1	.05	1.35	.042	1.350	.135
Helpers	10	70	3.47	67.88	2.165	.970	.097
Helpers, female	9.75	49	2.43	30.17	.963	.616	.063
Iron workers	10	8	.40	11.35	.362	1.419	.141
Jewelers	10	[illegible]	[illegible]	9.50	.303	1.900	.190
Janitor	10	1	.05	1.75	.056	1.750	.175
Janitor, female	10	1	.05	1.00	.032	1.000	.100
Laborers	10	915	45.32	1,493.95	47.657	1.632	.162
Laborers, female	10	35	1.73	33.50	1.069	.957	.095
Millers	10	11	.54	26.37	.841	2.397	.239
Machinists	10	20	1.00	56.90	1.815	2.845	.284
Machinists' helper	10	1	.05	1.80	.058	1.800	.180
Machinists' tenders	10	53	2.63	78.44	2.502	1.480	.148
Machinists' hands	10	30	1.49	54.50	1.739	1.816	.181
Mechanics	10	6	.30	9.45	.301	1.575	.157
Mashers	10	3	.15	6.24	.199	2.080	.208
Moulders	10	2	.10	4.00	.128	2.000	.209
Millwright	10	1	.05	3.25	.104	3.250	.325
Organ builders	10	6	.30	11.00	.351	1.833	.183
Potters	10	4	.20	8.00	.255	2.000	.200
Printer	8	1	.05	2.00	.064	2.000	.250
Purse makers	10	3	.15	5.25	.167	1.750	.175
Purse makers, female	10	7	.35	4.16	.133	.594	.059
Papier mache, female	9	15	.74	11.25	.359	.750	.083
Polishers	10	6	.30	14.00	.447	2.333	.233
Pressers	10	3	.15	7.15	.228	2.383	.238
Painters	10	12	.60	11.46	.366	.955	.095
Platers	10	8	.40	18.25	.582	2.281	.228
Packers	10	45	2.23	48.22	1.538	1.071	.107
Packers, female	10	39	1.93	22.57	.720	.578	.057
Pressmen	10	19	.94	37.87	1.208	1.993	.199
Rulers, female	10	11	.54	8.00	.255	.727	.072
Rubberman	10	1	.05	2.50	.080	2.500	.250
Repair men	10	6	.30	10.75	.343	1.790	.179

MISCELLANEOUS—Continued.

OCCUPATION.	Average hours per day.	PERSONS.		WAGES.			
						Average.	
		Number.	Per cent.	Total per day.	Per cent.	Per day.	Per hour.
Setters	10	2	.10	5.50	.175	2.750	.275
Spirits runner	10	1	.05	3.17	.101	3.170	.317
Sewers, female	10	10	.50	7.99	.255	.799	.079
Sawyers	10	8	.40	29.51	.941	3.688	.368
Scalers	10	2	.10	4.50	.144	2.250	.225
Slashers	10	4	.20	7.60	.242	1.900	.190
Straw sizers	10	5	.25	9.25	.295	1.850	.185
Skimmers	10	2	.10	4.11	.131	2.055	.205
Steam fitters	10	3	.15	6.75	.215	2.250	.225
Straw mill oprs., female	10	72	3.57	125.75	4.011	1.746	.174
Spinners	10	6	.30	10.55	.337	1.758	.175
Trimmers, female	10	98	4.85	134.50	4.291	1.372	.137
Type makers	10	11	.54	17.50	.558	1.590	.159
Tub washer	10	1	.05	1.73	.055	1.73	.173
Teamsters	9.71	7	.35	13.24	.422	1.89	.194
Upholsterers	10	4	.20	5.02	.160	1.255	.125
Upholsterers, female	10	14	.69	7.76	.247	.555	.055
Vinegar men	10	4	.20	6.72	.214	1.680	.168
Watchmen	10.44	9	.45	15.25	.487	1.694	.162
Whittlers	10	3	.15	8.30	.265	2.766	.276
Wire framer, female	10	1	.05	1.00	.032	1.000	.100
Wool sizers	10	7	.35	11.75	.375	1.678	.167
Wagon maker	10	1	.05	1.50	.048	1.500	.150
Willow workers	10	41	2.03	48.21	1.538	1.176	.117
Wood workers	10	45	2.23	64.08	2.044	1.424	.142
Yardmen	10	3	.15	4.69	.150	1.563	.156
Yeastmen	10	5	.25	8.89	.284	1.778	.177
Yeast wrapper	10	1	.05	.75	.024	.750	.075
Total and average	9.95	2,019	100.00	$3,134.02	100.000	$1.552	$0.155
Male	9.99	1,606	79.52	$2,699.85	86.136	$1.681	$0.168
Female	9.82	413	20.48	434.17	13.864	1.051	.107
Artsist	9	1	1.20	$3.00	1.737	$3.000	$0.333
Bookkeepers	10	2	2.41	4.17	2.415	2.085	.208
Captain (boot)	8	1	1.21	3.50	2.027	3.500	.457
Foremen	9.84	32	38.55	77.33	44.778	2.417	.245
Foreladies	10	4	4.82	3.69	2.137	.923	.092
Inspectors	10	12	14.46	28.00	16.214	2.333	.233
Superintendent	10	1	1.21	7.00	4.054	7.000	.700
Stenographers	9	3	3.61	3.75	2.172	1.250	.138
Stenographers, female	8	18	21.69	22.75	13.172	1.263	.157
Shipping clerks	10	3	3.61	6.00	3.474	2.000	.200
Stock keepers	10	4	4.82	6.50	3.766	1.625	.162
Sculptor	8	1	1.21	3.50	2.027	3.600	.437
Total and average	9.41	83	100.00	$172.69	100.000	$2.081	$0.221
Male	9.78	61	73.50	$146.25	84.689	$2.400	$0.245
Female	8.36	22	26.50	26.44	15.311	1.201	.143

Table B—Showing number of persons, male and female, and total number and proportion in each class of employes, classified by weekly earnings received, together with the average wage per day received in each class and the total number of persons employed by months and the range of employment for *all* establishments reporting either as to wages and employes, in detail, or classified weekly earnings.

Classification of Weekly Earnings.					Average Wages per Day.			No. Persons Emp. by Month,		
Classification.	No. of Persons.			Per cent.						
	Male.	Female.	Total		Male.	Female.	Total	Month	No.	Range.
Under $5 00..	115	256	371	14.00	$.65	$.608	$.623	Jan...	2,199	79.50
$ 5 00 but under 6 00..	22	33	55	2.08	.937	.879	.92	Feb ...	2,201	79.57
6 00 but under 7 00 .	65	101	166	6.26	1.031	1.000	1.001	Mar ..	2,280	82.43
7 00 but under 8 00 .	112	49	161	6 07	1.322	1.25	1.250	Apr...	2,323	83.95
8 00 but under 9 00..	66	......	66	2.49	1.359	......	1.359	May ..	2,448	84.89
9 00 but under 10 00..	355	73	428	16.14	1.525	1.50	1.523	June .	2,392	86.48
10 00 but under 12 00..	790	50	840	31.69	1.748	1.75	1.748	July..	2,454	88.58
12 00 but under 15 00..	321	56	377	14.22	2.102	2.103	2.102	Aug ..	2,724	98.48
15 00 but under 20 00..	130	22	152	5.73	2.733	2.733	2.733	Sept..	2,766	100.00
20 00 and over	33	2	35	1.32	4.194	3.75	4.178	Oct...	2,352	85.03
								Nov ..	2,237	80.87
Total................	2,009	642	2,651	100.00	$1.707	$1.058	$1.573	Dec ..	2,304	83.26
								Ave ..	2,382	86.11

NINE LESSER INDUSTRIES.

BEVERAGES—16 ESTABLISHMENTS.

Table A—Showing by occupation, classes, hours of work per day, number and proportion of persons employed, total wages and proportion of wages paid and average wages per day and per hour in each occupation for that portion of the industry reporting employes in detail.

Occupation.	Average hours per day.	Persons.		Wages.			
		Number.	Per cent.	Total per day.	Per cent.	Average.	
						Per day.	Per hour.
Bottlers	10	25	15.625	$47.83	18.869	$1.912	$0.191
Brewer	10	1	.625	1.67	.659	1.670	.169
Bottle workers	10	31	19.375	49.73	19.619	1.604	.160
Drivers	10	10	6.250	17.59	6.940	2.750	.275
Engineers	10	4	2.500	11.00	4.340	2.750	.275
Fireman	10	1	.625	1.83	.721	1.830	.183
Helpers	10	12	7.500	15.82	6.241	1.318	.131
Labelers	10	23	14.375	28.80	11.362	1.252	.125
Laborers	10	16	10.000	22.35	8.817	1.396	.139
Machine tenders	10	3	1.875	3.30	1.302	1.100	.110
Packers	10	34	21.250	53.56	21.130	1.569	.156
Total and average	10	160	100.000	$253.48	100.000	$1.584	$0.158
Clerk, female	8	1	16.667	$0.75	4.610	$0.750	$0.093
Foremen	10	4	66.666	14.00	86.160	3.500	.350
Stenographer	7	1	16.667	1.50	9.230	1.500	.214
Total and average	9.16	6	100.000	$16.25	100.0.0	$2.708	$0.295
Male	9.4	5	80.00	$15.50	95.38	$3.10	$0.329
Female	8	1	20.00	.75	4.62	.75	.093

Table B—Showing number of persons, male and female, and total number and proportion in each class of employes, classified by weekly earnings received, together with the average wage per day received in each class and the total number of persons employed by months and the range of employment for *all* establishments reporting, either as to wages and employes, in detail, or classified weekly earnings.

Classification of Weekly Earnings.					Average Wages Per Day.			No Persons Emp. by Month.		
Classification.	No. of Persons.			Per cent.						
	Male.	Female.	Total		Male.	Female.	Total	Month.	No.	Range.
Under $5 00	8	1	9	5.422	$.805	$.75	$.798	Jan	123	70.69
$ 5 00 but under 6 00	......	......	......	......	......	......	.....	Feb	136	78.16
6 00 but under 7 00	21	......	21	12.651	1.061	......	1.061	Mar	145	83.33
7 00 but under 8 00	14	......	14	8.433	1.257	......	1.257	April	152	87.36
8 00 but under 9 00	15	......	15	9.036	1.367	......	1.367	May	161	92.53
9 00 but under 10 00	29	......	29	17.469	1.500	......	1.500	June	170	97.70
10 00 but under 12 00	42	......	42	25.301	1.729	......	1.729	July	174	100.00
12 00 but under 15 00	22	......	22	13.254	2.024	......	2.024	Aug	167	95.98
15 00 but under 20 00	13	......	13	7.831	2.807	......	2.807	Sept	161	92.53
20 00 and over	1	......	1	.603	5.000	......	5.000	Oct	149	85.63
								Nov	151	86.78
Total	165	1	166	100.00	$1.063	$.75	$1.057	Dec	136	78.16
								Ave	154	88.51

CHEMICALS—9 ESTABLISHMENTS.

Table A—Showing by occupation, classes, hours of work per day, number and proportion of persons employed, total wages and proportion of wages paid and average wages per day and per hour in each occupation for that portion of the industry reporting employes in detail.

OCCUPATION.	Average hours per day.	PERSONS.		WAGES.			
		Number.	Per cent	Total per day.	Per cent	Average.	
						Per day.	Per hour.
Bottlers	9	2	1.96	$3.00	2.110	$1.50	$0.166
Cooper	10	1	.98	2.00	1.407	2.00	.200
Engineers	10	6	5.88	14.00	9.847	2.333	.233
Firemen	10	2	1.96	4.00	2.814	2.00	.200
Helpers	9.77	18	17.65	26.11	18.365	1.45	.148
Helpers, female	10	16	15.69	13.22	9.298	.826	.082
Labelers, female	9	15	14.71	18.75	13.188	1.25	.138
Laborers	10	26	25.49	41.60	29.259	1.638	.163
Laborers, female	10	2	1.96	1.70	1.189	.85	.085
Machine tenders	10	8	7.84	10.65	7.491	1.331	.133
Machinist	10	1	.98	1.75	1.232	1.75	.175
Watchmen	11	2	1.96	2.10	1.478	1.05	.095
Wrappers, female	10	3	2.94	3.30	2.322	1.10	.110
Total and average.	9.81	102	100.00	$142.18	100.000	$1.393	$0.142
Male	9.93	66	64.71	$105.21	73.998	$1.594	$0.160
Female	9.58	36	35.29	36.97	26.002	1.027	.107
Foremen	9.5	2	100.00	$4.25	100.00	$2.125	$0.223

Table B—Showing number of persons, male and female, and total number and proportion in each class of employes, classified by weekly earnings received, together with the average wage per day received in each class and the total number of persons employed by months and the range of employment for *all* establishments reporting either as to wages and employes, in detail, or classified weekly earnings.

CLASSIFICATION OF WEEKLY EARNINGS.					AVERAGE WAGES PER DAY.			NO. PERSONS EMP BY MONTH.		
Classification.	No. of Persons.			Per cent.						
	Male.	Female.	Total		Male	Female	Total	Month.	No.	Range.
Under $5 00	4	8	12	11.54	$.687	$.71	$.702	Jan ..	88	80.73
$ 5 00 but under 6 00	1	9	10	9.62	.84	.868	.866	Feb...	92	84.40
6 00 but under 7 00	2	3	5	4.81	1.05	1.10	1.08	Mar ..	96	88.07
7 00 but under 8 00..	7	15	22	21.15	1.239	1.25	1.248	April..	99	90.83
8 00 but under 9 00..	1	1	2	1.92	1.40	1.42	1.41	May ..	95	87.16
9 00 but under 10 00..	24	......	24	23.07	1.516	......	1.516	June..	104	95.41
10 00 but under 12 00..	11	......	11	10.58	1.686	......	1.686	July...	104	95.41
12 00 but under 15 00..	13	......	13	12.50	2.019	......	2.019	Aug...	109	100.00
20 00 but under 20 00..	5	......	5	4.81	2.50	......	2.50	Sept..	103	94.49
20 00 and over.........	......	......	......	......	......	......	...	Oct ...	99	90.83
								Nov...	94	86.24
Total...............	68	36	104	100.00	$1.61	$1.027	$1.408	Dec...	89	81.65
								Ave...	98	89.91

COAL AND WOOD—24 ESTABLISHMENTS.

Table A—Showing by occupation, classes, hours of work per day, number and proportion of persons employed, total wages and proportion of wages paid and average wages per day and per hour in each occupation for that portion of the industry reporting employes in detail.

Occupation.	Average hours per day.	Persons.		Wages.			
		Number.	Per cent.	Total per day.	Per cent.	Average.	
						Per day.	Per hour.
Blacksmiths	10	5	.56	$12.50	.703	$2.50	$0.250
Carpenters	10	9	1.02	25.25	1.420	2.805	.280
Conveyor operators	10	6	.68	12.50	.703	2.083	.208
Engineers	9.94	18	2.04	45.95	2.585	2.552	.257
Firemen	9.75	8	.90	16.71	.940	2.088	.214
Harnessmaker	10	1	.11	2.00	.112	2.00	.200
Hoisters	9.87	85	9.61	206.75	11.630	2.432	.246
Hostlers	10	6	.68	12.50	.703	2.083	.208
Laborers	9.86	241	27.23	433.75	24.398	1.80	.182
Machinist	10	1	.11	3.00	.169	3.00	.300
Oilers	10	6	.68	14.00	.788	2.333	.233
Painters	10	2	.22	5.00	.281	2.30	.230
Sawmen	10	2	.22	4.00	.225	2.00	.200
Stevedores	10	24	2.73	144.00	8.099	6.00	.600
Teamsters	10.05	119	13.45	231.05	12.996	1.941	.193
Watchmen	10	9	1.02	15.81	.889	1.756	.175
Weighérs	10	2	.22	4.82	.271	2.41	.241
Wood pilers	10	16	1.80	20.50	1.152	1.281	.128
Yardmen	10	325	36.72	567.75	31.935	1.747	.174
Total and average..	9.96	885	100.00	$1,777.84	100.000	$2.00	$0.200
Foremen	9.98	52	94.54	$134.69	95.343	$2.59	$0.259
Manager	10	1	1.82	3.00	2.123	3.00	.300
Timekeepers	10	2	3.64	3.58	2.534	1.79	.179
Total and average..	9.98	55	100.00	$141.27	100.000	$2.568	$0.257

Table B.—Showing number of persons, male and female, and total number and proportion in each class of employes, classified by weekly earnings received, together with the average wage per day received in each class and the total number of persons employed by months and the range of employment for *all* establishments reporting either as to wages and employes, in detail, or classified weekly earnings.

Classification of Weekly Earnings.					Average Wages Per Day.			No. Persons Emp. by Month		
Classification.	No. of Persons.			Per cent.						
	Male.	Female.	Total		Male.	Female.	Total	Month.	No.	Range.
Under $5 00..	10	......	10	.50	$.75	......	$.75	Jan...	1,442	71.81
$ 5 00 but under 6 00	.....	......	.....	.....	.....	......		Feb...	1,270	63.25
6 00 but under 7 00 .	19	......	19	.96	1.00	......	1.00	Mar ...	1,253	62.40
7 00 but under 8 00..	22	......	22	1.11	1.25	......	1.25	April .	1,621	80.73
8 00 but under 9 00 .	5	......	5	.25	1.375	......	1.375	May ...	1,969	98.06
9 00 but under 10 00..	103	......	103	5.16	1.500	......	1.500	June ..	2,008	100.00
10 00 but under 12 00..	785	......	785	39.45	1.755	......	1.755	July..	1,946	96.91
12 00 but under 15 00 .	580	......	580	29.15	2.082	......	2.082	Aug ..	1,880	93.59
15 00 but under 20 00..	302	......	302	15.18	2.595	......	2.595	Sept..	1,849	92.07
20 00 and over..........	164	......	164	8.24	5.558	......	5.558	Oct ..	1,842	91.73
								Nov ..	1,783	88.79
Total..............	1,990	......	1,990	100.00	$2.042	......	$2.042	Dec ..	1,656	82.47
								Ave ..	1,710	85.61

ELEVATORS AND WAREHOUSES—22 ESTABLISHMENTS.

Table A.—Showing by occupation, classes, hours of work per day, number and proportion of persons employed, total wages and proportion of wages paid and average wages per day and per hour in each occupation for that portion of the industry reporting employes in detail.

OCCUPATION.	Average hours per day.	PERSONS.		WAGES.			
		Number.	Per cent.	Total per day.	Per cent.	Average.	
						Per day.	Per hour.
Carpenters	10	3	1.40	$4.15	.964	$2.075	$0.2 7
Delivery boy	10	1	.46	1.00	.232	1.00	.100
Electrician	10	1	.46	3.00	.696	3.00	.300
Elevator man	8	1	.46	2.35	.545	2.35	.294
Engineers	10	5	2.33	15.89	3.688	3.178	.317
Firemen	10	6	2.79	12.16	2.822	2.027	.202
Helpers	10	5	2.33	5.50	1.276	1.10	.110
Laborers	10	148	68.84	291.97	67.760	1.972	.197
Machine tenders	10	2	.93	3.50	.812	1.75	.175
Millwrights	10	7	3.26	18.11	4.2 3	2.587	.258
Oilers	10	14	6.51	27.93	6.482	1.995	.199
Teamsters	10	3	1.40	4.86	1.128	1.62	.162
Watchmen	11.07	13	6.04	24.57	5.702	1.89	.170
Weighers	10.66	6	2.79	15.90	3.690	2.65	.243
Total and average	10.07	215	100.00	$430.89	100.000	$2.004	$0.193
Agents	10	3	23.08	$5.81	19.775	$1.937	$0.193
Bartenders	10	2	15.38	4.00	13.615	2.00	.200
Clerk	10	1	7.69	1.92	6.535	1.92	.192
Foremen	10	7	53.85	17.65	60.075	2.521	.252
Total and average	10	13	100.00	$29.38	100.000	$2.26	$0.233

Table B—Showing number of persons, male and female, and total number and proportion in each class of employes, classified by weekly earnings received, together with the average wage per day received in each class and the total number of persons employed by months and the range of employment for *all* establishments reporting either as to wages and employes, in detail, or classified weekly earnings.

CLASSIFICATION OF WEEKLY EARNINGS.					AVERAGE WAGES PER DAY.			NO. PERSONS EMP. BY MONTH.		
Classification.	No. of Persons.			Per cent.						
	Male.	Female.	Total		Male	Female.	Total	Month.	No.	Range.
Under $5 00.	......	......	......	......	....	.....	......	Jan...	180	51.72
$ 5 00 but under 6 00..	......	......	.....	....	......	......	......	Feb ..	184	52.87
6 00 but under 7 00..	7	......	7	2.36	$1.00	......	$1.00	Mar .	169	48.56
7 00 but under 8 00..	5	......	5	1.68	1.25	......	1.25	April.,	164	47.13
8 00 but under 9 00..	2	......	2	.67	1.47	....	1.47	May ..	137	39.37
9 00 but under 10 00..	27	......	27	9.09	1.50	......	1.50	June..	139	39.94
10 00 but under 12 00 .	23	.....	23	7.75	1.746	....	1.746	July..	126	36.21
12 00 but under 15 00..	209	......	209	70.37	2.014	......	2.014	Aug ..	154	44.25
15 00 but under 20 00	22	.....	22	7.41	2.75	......	2.75	Sept .	235	67.53
20 00 and over.........	2	......	2	.67	3.92	....	3.92	Oct...	348	100.00
								Nov ..	345	99 14
Total............ ...	297	...	297	100.00	$2.018	......	$2.018	Dec...	238	68.39
								Ave...	202	58.05

LAUNDRIES—44 ESTABLISHMENTS.

Table A.—Showing by occupation, classes, hours of work per day, number and proportion of persons employed, total wages and proportion of wages paid and average wages per day and per hour in each occupation for that portion of the industry reporting employes in detail.

OCCUPATION.	Average hours per day.	Persons.		Wages.			
		Number.	Per cent.	Total per day.	Per cent.	Average.	
						Per day.	Per hour.
Drivers	9.95	65	9.75	$124.96	16.788	$1.907	$0.191
Engineers	9.94	17	2.55	37.79	5.077	2.222	.223
Finishers, female	9.14	4	.60	4.14	.556	1.035	.113
Fireman	10	1	.15	1.50	.202	1.50	.150
Helpers	10	6	.90	7.43	.998	1.236	.123
Helpers, female	9.86	111	16.64	99.79	13.406	.899	.091
Hostler	10	1	.15	2.00	.269	2.00	.200
Ironers, female	9.92	308	46.18	279.66	37.571	.907	.091
Laborers	10	3	.45	4.32	.580	1.44	.144
Machine oprs., female	10	28	4.20	31.70	4.259	1.132	.113
Mangle girls	10	12	1.80	9.20	1.236	.766	.076
Markers & sorters, fem.	10	7	1.05	9.42	1.265	1.345	.134
Polisher	10	1	.15	2.50	.336	2.50	.250
Starchers, female	9.84	33	4.95	32.23	4.330	.976	.099
Washers	10	26	3.88	50.41	6.772	1.938	.193
Washers, female	9.79	43	6.45	45.97	6.176	1.069	.109
Watchman	10	1	.15	1.33	.179	1.33	.133
Total and average	9.91	667	100.00	$744.35	100.000	$1.116	$0.112
Male	9.96	121	18.14	$232.24	31.200	$1.919	$0.192
Female	9.89	546	81.86	512.11	68.800	.938	.094
Bookkeepers, female	9.40	10	62.50	$13.99	51.757	$1.399	$0.148
Foremen	10	2	12.50	6.11	22.605	3.055	.306
Forewomen	10	2	12.50	3.83	14.169	1.915	.191
Manager	8.33	1	6.25	2.00	7.399	2.00	.240
Stenographer, female	10	1	6.25	1.10	4.070	1.10	.110
Total and average	9.52	16	100.00	$27.03	100.000	$1.689	$0.177
Male	9.44	3	18.75	$8.11	30.004	$2.703	$0.152
Female	9.53	13	81.25	18.92	69.996	1.455	.152

Table B—Showing number of persons, male and female, and total number and proportion in each class of employes, classified by weekly earnings received, together with the average wage per day received in each class and the total number of persons employed by months and the range of employment for *all* establishments reporting either as to wages and employes, in detail, or classified weekly earnings.

Classification of Weekly Earnings.					Average Wages Per Day.			No. Persons Emp. by Month.		
Classification.	No. of Persons.			Per cent.						
	Male.	Female.	Total		Male.	Female.	Total	Month.	No.	Range.
Under $5 00	......	201	201	25.06	.....	$.665	$.665	Jan...	716	89.95
$ 5 00 but under 6 00	2	56	58	7.23	$.850	.868	.868	Feb ..	707	88.82
6 00 but under 7 00	8	282	290	36.16	1.000	1.036	1.035	Mar ..	714	89.69
7 00 but under 8 00	10	67	77	9.60	1.232	1.235	1.235	April..	738	92.71
8 00 but under 9 00	5	14	19	2.37	1.376	1.376	1.376	May ..	760	94.22
9 00 but under 10 00	20	13	33	4.12	1.555	1.516	1.541	June..	788	98.99
10 00 but under 12 00	25	4	29	3.62	1.701	1.670	1.698	July..	796	100.00
12 00 but under 15 00	46	8	54	6.73	2.088	2.000	2.082	Aug ..	793	99 62
15 00 but under 20 00	36	3	39	4.86	2.642	2.500	2.637	Sept..	778	97.74
20 00 and over	2	......	2	.25	4.110	......	4.110	Oct...	749	94.09
								Nov,..	730	91.71
Total	154	648	802	100.00	$1.938	$.950	$1.129	Dec...	719	90.32
								Ave...	749	94.09

LIGHT, WATER AND POWER—8 ESTABLISHMENTS.

Table B—Showing number of persons, male and female, and total number and proportion in each class of employes, classified by weekly earnings received, together with the average wage per day received in each class and the total number of persons employed by months and the range of employment for *all* establishments reporting either as to wages and employes, in detail, or classified weekly earnings.

Classification of Weekly Earnings.					Average Wages Per Day.			No. Persons Emp. by Month.		
Classification.	No. of Persons.			Per cent.						
	Male.	Female.	Total		Male.	Female.	Total	Month.	No.	Range.
Under $5 00..	4	3	7	.63	.. ..	......	......	Jan...	625	48.15
$ 5 00 but under 6 00..	3	.....	3	.27	......	......	......	Feb...	581	44.76
6 00 but under 7 00..	1	1	2	.18	......	......	......	Mar...	648	49.92
7 00 but under 8 00	31	....	31	2.81	......	......	......	April..	1,002	77.19
8 00 but under 9 00	22	......	22	2.00	......	......	......	May...	1,179	90.83
9 00 but under 10 00	114	......	114	10.33	......	......	.. ...	June..	1,298	100.00
10 00 but under 12 00..	483	.....	483	43.75	......	......	......	July ..	1,108	85.36
12 00 but under 15 00..	225	....	225	20.38	......	... ..	.....	Aug...	1,099	84.68
15 00 but under 20 00..	173	......	173	15.67	......	......	......	Sept..	991	76.35
20 00 and over	44	......	44	3.98	......	......	......	Oct...	937	72.19
								Nov...	921	70.95
Total...............	1,100	4	1,104	100.00	......	......	......	Dec...	772	59.48
								Ave...	938	72.26

LITHOGRAPHING AND ENGRAVING—9 ESTABLISHMENTS.

Table A—Showing by occupation, classes, hours of work per day, number and proportion of persons employed, total wages and proportion of wages paid and average wages per day and per hour in each occupation for that portion of the industry reporting in detail.

Occupation.	Average hours per day.	Persons.		Wages.			
		Number.	Per cent.	Total per day.	Per cent	Average.	
						Per day.	Per hour.
Artists	8	13	3.27	$54.56	$7.065	$4.196	$0.524
Artists' apprentices	8	2	.50	.93	.124	.465	.581
Artists, photo engraving	8	3	.75	9.00	1.166	3.00	.375
Binders, female	9	31	7.79	23.50	3.043	.758	.842
Book binders	9	3	.75	7.00	.907	2.333	.259
Boys	8.42	7	1.76	5.90	.764	.842	.100
Check binder	9	1	.25	1.75	.226	1.75	.194
Check bindes' appr'tices	9.33	3	.75	1.75	.226	.583	.062
Compositors	9	3	.75	6.75	.874	2.25	.250
Compositors' apprentice..	9.50	1	.25	.75	.096	.75	.078
Cutters	9.12	4	1.01	8.25	1.069	2.062	.226
Designers' apprentices ..	8	3	.75	1.42	.183	.473	.059
Die cutters, female	9	5	1.26	3.17	.410	.634	.070
Engineers	9	2	.50	5.99	.776	2.995	.332
Elevatorman	9.50	1	.25	1.50	.134	.150	.157
Engravers	8.26	28	7.04	102.64	13.291	3.665	.443
Engravers' apprentices...	8.41	6	1.51	3.75	.485	.625	.074
Enamel boys	9.50	4	1.01	2.00	.258	.50	.052
Feeders	9	22	5.53	34.93	4.524	1.586	.176
Feeders' apprentices	9.39	14	3.52	12.74	1.649	.91	.096
Fireman	10	1	.25	2.00	.258	2.00	.200
Helpers	9	12	3.01	7.77	1.006	.647	.071
Janitor	10	1	.25	1.33	.172	1.33	.133
Laborers	9	2	.50	4.00	.518	2.00	.222
Lithographers	8	5	1.26	16.50	2.136	3.30	.412
Lithographers' apprentice	8	1	.25	.75	.097	.75	.093
Lithographers' printers..	8	14	3.53	53.91	6.981	3.85	.481

LITHOGRAPHING & ENGRAVING—9 ESTABLISHMENTS—Con.

Occupation.	Average hours per day.	Persons.		Wages.			
		Number.	Per cent.	Total per day.	Per cent.	Average.	
						Per day.	Per. hour
Numberers and stitchers	9.50	6	1.51	4.50	.582	.75	.078
Packer	9.50	1	.25	2.00	.258	2.00	.210
Packer dampner	9.50	1	.25	2.00	.258	2.00	.210
Paper dampner	9.50	1	25	.92	.119	.92	.096
Paper cutters	9	8	2.01	15.51	2.008	1.938	.215
Paper handlers	9	4	1.01	5.67	.734	1.417	.157
Paper joggers	9	2	.50	3.00	.388	1.50	.166
Photo engravers	9	2	.50	7.84	1.015	3.92	.436
Photo engravers' ap'tices	9	7	1.76	5.18	.671	.74	.082
Photo artists, wood	9	8	2.01	31.69	4.103	3.961	.440
Press boys	9	39	9.80	24.84	3.216	.636	.070
Press feeders	9	11	2.77	17.20	2.227	1.563	.173
Pressmen	9.04	47	11.81	131.07	16.972	2.788	.308
Pressmen, apprentices	9	16	4.02	10.25	1.327	.64	.071
Proofer	9	1	.25	2.50	.323	2.50	.277
Rulers	9.50	2	.50	4.66	.603	2.33	.246
Stenceler	9	1	.25	1.17	.152	1.17	.130
Stencelers, female	9	2	.50	1.50	.194	.75	.0 3
Stone grinders	8.70	10	2.51	19.74	2.556	1.974	.226
Transferrers	9.08	29	7.28	97.65	12.644	3.37	.371
Transferrers' apprentices	9.16	6	1.51	4.25	.550	.708	.076
Watchman	10	1	.25	1.66	.214	.116	.116
Wood engraver	9	1	.25	3.00	.388	3.00	.333
Total and average	8.88	398	100.00	$772.29	100.000	$1.94	$0.218
Male	8.86	354	88.94	$739.67	95.776	$2.089	$0.235
Female	9.06	44	11.06	32.62	4.224	.741	.0 1
Foreman	9.50	1	5.27	3.00	6.18	3.00	.315
Shippers	9	3	15.78	4.00	8.24	1.333	.148
Shipping clerks	9	2	10.53	4.75	9.77	2.375	.263
Stenographers, female	9.50	3	15.78	2.75	5.66	.90	.094
Total and average	8.84	19	100.00	$48.58	100.00	$2.557	$0.289
Male	8.60	14	73.68	$41.58	85.59	$2.97	$0.345
Female	9.50	5	26.32	7.00	14.41	1.40	.147

Table B—Showing number of persons, male and female, and total number and proportion in each class of employes, classified by weekly earnings received, together with the average wage per day received in each class and the total number of persons employed by months and the range of employment for *all* establishments reporting either as to wages and employes, in detail, or classified weekly earnings.

Classification of Weekly Earnings.					Average Wages Per Day.			No. Persons Emp. by Month.		
Classification.	No. of Persons			Per cent.						
	Male.	Female.	Total		Male.	Female.	Total	Month.	No.	Range.
Under $5 00	121	46	167	34 37	$.628	$.662	$.637	Jan	487	97.79
$ 5 00 but under 6 00	6	3	9	1.85	.92	.873	.892	Feb	498	100.00
6 00 but under 7 00	25	1	26	5.35	1.004	1.000	1.004	Mar	477	95.78
7 00 but under 8 00	18	1	19	3.90	1.22	1.250	1.222	April	487	97.79
8 00 but under 9 00	2	.....	2	.42	1.28	..	1.38	May	483	96.99
9 00 but under 10 00	21	1	22	4.52	1.512	1.500	1.511	June	494	99.20
10 00 but under 12 00	34	.....	34	6.99	1.723	....	1.723	July	486	97.59
12 00 but under 15 00	44	2	46	9.46	2 073	2.000	2.069	Aug	487	97.79
15 00 but under 20	73	1	74	15.23	3.007	2.750	3.003	Sept	488	97.99
20 00 and over	87	.....	87	17.91	4.346	. .	4.346	Oct	492	98 79
								Nov	488	97.99
Total	431	55	486	100 00	$2.122	$.809	$1.968	Dec	482	96.79
								Ave	487	97.79

PRINTING AND PUBLISHING—17 ESTABLISHMENTS.

Table A—Showing by occupation, classes, hours of work per day, number and proportion of persons employed, total wages and proportion of wages paid and average wages per day and per hour in each occupation for that portion of the industry reporting employes in detail.

Occupation.	Average hours per day.	Persons.		Wages.			
		Number.	Per cent.	Total per day.	Per cent	Average.	
						Per day	Per hour.
Apprentices	9	2	1.47	$0.83	.322	$0.415	$0.461
Bindery worker	9	1	.74	.41	.159	.410	.455
Bindery workers, female	9	11	8.09	7.71	2.987	.700	.777
Compositors	8.54	42	30.88	111.92	43.373	2.664	.311
Compositors, female	9	2	1.47	2.00	.775	1.00	.111
Designer	9	1	.74	2.00	.775	2.00	.222
Engineer	10	1	.74	1.50	.583	1.50	.150
Editors' clerks	9	12	8.82	36.08	13.983	3.006	.334
Editors' clerks, female	9	4	2.94	7.25	2.81	1.812	.201
Engravers	9	4	2.94	10.75	4.166	2.687	.298
Helpers	9.14	7	5.14	5.25	2.035	.75	.082
Linotypist	9	1	.74	3.00	1.163	3.00	.333
Makers-up	9	9	6.62	8.67	3.36	.963	.107
Paper cutters	9	4	2.94	7.82	3.031	1.955	.217
Pressmen	9	12	8.82	25.19	9.758	2.099	.233
Press feeders	9	18	13.23	18.99	7.36	1.055	.117
Printers	10	4	2.94	7.00	2.713	1.75	.175
Teamster	9	1	.74	1.67	6.47	1.67	.183
Total and average	8.90	136	100.00	$258.04	100.00	$1.879	$0.211
Male	8.89	119	87.50	$241.08	93.427	$2.025	$0.227
Female	9	17	12.50	16.96	6.573	.997	.110

Table B—Showing number of persons, male and female, and total number and proportion in each class of employes, classified by weekly earnings received, together with the average wage per day received in each class and the total number of persons employed by months and the range of employment for *all* establishments reporting either as to wages and employes, in detail, or classified weekly earnings.

Classification of Weekly Earnings.					Average Wages Per Day.			No Persons Emp. by Month.		
Classification.	No. of Persons.			Per cent.						
	Male.	Female.	Total		Male	Female	Total	Month.	No	Range.
Under $5.00	52	30	82	23.63	$.57	$.57	$.57	Jan.	314	95.44
$5.00 but under 6.00	11	6	17	4.90	.87	.91	.885	Feb.	316	96.05
6.00 but under 7.00	14	4	18	5.19	1.016	1.02	1.018	Mar	321	97.51
7.00 but under 8.00	9	2	11	3.17	1.236	1.17	1.225	April	318	96.66
8.00 but under 9.00	7	1	8	2.31	1.40	1.35	1.393	May	325	98.78
9.00 but under 10.00	22	....	22	6.34	1.513	....	1.513	June	309	93.92
10.00 but under 12.00	31	5	36	10.37	1.725	1.72	1.725	July	310	94.23
12.00 but under 15.00	26	1	27	7.78	2.045	2.00	2.02	Aug.	318	96.66
15.00 but under 20.00	81	3	84	24.21	2.838	3.00	2.844	Sept.	329	100.00
20.00 and over	42	....	42	12.10	3.73	...	3.73	Oct.	327	99.39
								Nov.	322	97.87
Total	295	52	347	100.00	$2.025	$.997	$1.879	Dec.	323	98.18
								Ave.	319.3	97.05

MISCELLANEOUS—17 ESTABLISHMENTS.

Table A—Showing by occupation, classes, hours of work per day, number and proportion of persons employed, total wages and proportion of wages paid and average wages per day and per hour in each occupation for that portion of the industry reporting employes in detail.

Occupation.	Average hours per day.	Persons.		Wages.			
		Number.	Per cent.	Total. per day.	Per cent	Average.	
						Per day.	Per hour.
Coopers	10	5	1.21	$15.00	1.184	$3.00	$0.300
Gardeners	10	5	1.21	8.84	.698	1.768	.176
Laborers	11.52	388	93.72	1,213.38	95.738	3.127	.271
Machinist	10	1	.24	2.50	.197	2.50	.2 0
Plater	10	1	.24	1.25	.099	1.25	.125
Polishers	9.50	6	1.45	12.25	.966	2.061	.216
Repair men	10	4	.97	8.00	.631	2.00	.200
Teamsters	10	3	.72	5.01	.395	1.67	.167
Utility man	10	1	.24	1.17	.092	1.17	.117
Total and average	11.39	414	100.00	$1,267.40	100.00	$2.23	$0.195
Bookkeeper, female	9	1	.61	$1.10	$0.849	$1.10	$0.122
Clerks, female	10	148	90.80	101.32	18.197	.657	.068
Foremen	10	9	5.52	20.10	15.513	2.233	.223
Stenographers, female	10	5	3.07	7.05	5.481	1.41	.141
Total and average	9.99	163	100.00	$129.57	100.00	$0.795	$0.079
Male	10	9	5.52	$20.10	15.513	$2.233	$0.223
Female	9.99	154	94.48	109.47	84.487	71	.071

Table B—Showing number of persons, male and female, and total number and proportion in each class of employes, classified by weekly earnings received, together with the average wage per day received in each class and the total number of persons employed by months and the range of employment for *all* establishments reporting either as to wages and employes, in detail, or classified weekly earnings.

Classification of Weekly Earnings					Average Wages Per Day.			No. Persons Emp. by Month.		
Classification.	No. of Persons.			Per cent.						
	Male.	Female.	Total		Male	Female.	Total	Month.	No.	Range.
Under $5 00	35	159	191	14.50	$.75	$.646	$.647	Jan.	886	63.79
$ 5 00 but under 6 00	13	3	16	1.19	.90	.90	.90	Feb	877	63.14
6 00 but under 7 00	126	21	147	10.99	1 900	1.011	1.010	Mar	988	71.13
7 00 but under 8 00	109	7	116	8.64	1.238	1.283	1.245	April	1,309	94.21
8 00 but under 9 00	69	4	60	4.79	1.353	1.34	1.352	May	1,272	91.58
9 00 but under 10 00	233	2	235	17.5	1.510	1.50	1.51	June	1,318	94.89
10 00 but under 12 00	94	1	95	7.10	1.693	1.70	1.694	July	1,269	91.36
12 00 but under 15 00	101	......	101	7.55	2.025	....	2.025	Aug	1,244	89.56
15 00 but under 20 00	55	.....	55	4.12	2.83	......	2.83	Sept.	1,291	92.94
20 00 and over	315	......	315	23.55	3 60	......	3.60	Oct.	1,389	100.00
								Nov.	1,352	97.34
Total	1,141	197	1,338	100.00	$3.043	$.71	$2.421	Dec.	1,248	89.85
								Ave.	1,204	86.69

SUMMARY TABLE.

Showing for 59,743 employes in all industries and occupations number of persons, male and female, employed in each occupation class, the hours of work per day and average wages per day and per hour.

SUMMARY OF 57 OCCUPATIONS.

OCCUPATION.	TOTAL PERSONS.		TOTAL HOURS.		TOTAL WAGES PER DAY.		AVERAGE HOURS PER DAY.		AVERAGE WAGES PER Day.		AVERAGE WAGES PER Hour.	
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female	Male.	Female.	Male.	Female.
Blacksmiths....	485	....	4,823.50	....	$1,144 03	....	9.94	.. ..	2.358	.....	.237	.....
Boiler makers	156	.....	1,552.00	....	361 49	.... .	9.94	....	2.317	.....	.233	.....
Book keepers ...	20	17	202.00	157.50	35 58	$19 59	10.10	9 26	1.779	1.150	.176	.124
Box makers.....	284	254	2,438.00	2,383.00	494 98	190 16	8.58	9.38	1.743	.749	.203	.079
Butter makers..	40	.....	280.00	....	77 85	....	9.50	.....	1.946	.....	.204	.....
Candy makers..	117	349	1,170.00	3.490.00	231 02	211 74	10.00	10.00	1.974	.606	.197	.061
Carders	16	66	160.00	660.00	19 17	49 13	10.00	10.00	1.199	.744	.120	.074
Carpenters	1,351	.....	13,158.33	....	2,945 05	....	9.73	.....	2.179		.223	.....
Cigar makers...	465	29	3,854.00	245.00	998 07	43 87	8.28	8.45	2.146	1.512	.259	.178
Clerks....	108	17	1,079.09	171.00	217 60	15 75	9.99	10.05	2.015	.926	.201	.092
Core makers....	244	54	2,426.75	540.00	445 95	42 17	9.94	10.00	1.827	.781	.183	.078
Cutters	402	59	3,903.00	592.00	791 78	50 68	9.70	10.03	1.969	.859	.203	.085
Electricians ..	92	.....	866.50	....	205 24	....	9.41	.....	2.231	.....	.237	.....
Engineers.......	472	.....	4,805.00	... .	1,151 02	....	10.18	.....	2.439	.....	.239	.....
Finishers	732	180	7,247.16	1,783.00	1,255 97	155 54	9.90	9.90	1.715	.863	.173	.087
Firemen	422	.....	4,470.50	....	807 93	....	10.59	.....	1.914	..	.180	.....
Foremen	627	29	6,310.00	278 00	1,746 45	35 58	10.06	9.58	2.785	1.226	.276	.127
Helpers	5,789	1,214	57,714.66	12,077.00	7,691 87	956 66	9.97	9.94	1.326	.788	.133	.079
Knitters	15	993	142.00	9,561.00	37 57	846 00	9.46	10.00	2.504	.852	.233	.085
Laborers........	14,097	686	142,019.83	6,968.00	21,796 69	581 20	10.07	10.15	1.546	.848	.153	.083
Lumbermen.....	13	.....	130.00	....	18 80	....	10.00	.....	1.446	.....	.144	.....
Machine tenders	3,254	384	32,448 50	3,555.00	9,015 91	387 47	9.96	9.25	2.777	1.008	.278	.106
Machinists	2,458	.....	24,393.41	....	6,024 55	....	9.92	.....	2.451	.....	.247	.....
Malsters	102	.....	1,014.00	....	2 9 31	....	9.04	.....	2.052	.....	.206	.....
Masons	52	.....	437.00	....	159 70	....	8.40	.....	3.071	.....	.365	..
Millers	126	.....	1,267.00	....	267 07	....	10.05	.....	2.119	.....	.210	.....
Millwrights.....	154	.....	1,509.00	... .	305 84	....	9.79	.....	2.570	.....	.262	.....
Moulders	2,011	.....	19,956.50	....	4,936 48	....	9.92	.....	2.454	.....	.247	.....
Packers..... ...	282	288	2,755.50	2 674.50	428 33	225 54	9.77	9.28	1.518	.783	.155	.084
Painters	654	1	6,476.00	10.00	1,252 44	1 33	9.90	10.00	1.915	1.330	.193	.133
Piece workers..	15	169	150.00	1,643.00	24 60	153 10	10.00	9.72	1.640	.905	.164	.093
Plumbers	23	.....	204.00	....	78 00	....	8.87	.....	3.391	.....	.382	.....
Printers..	6	.....	48.00	....	11 49	....	8 00	.....	1.915	.....	.239	.....
Quarry hands ..	397	.....	3,925.00	....	733 46	....	9.88	.....	1.847	.....	.186	.....
Salesmen	16	.....	151.50	....	34 82	... ...	9.46	.....	2.176	.....	.230	.....
Sash makers ...	2	.....	20.00	....	4 50	....	10.00	.....	2.250	.....	.225	.....
Sausage makers	122	.....	1,220.00	....	221 59	....	10 00	.....	1 816	.....	.181	.....
Sawyers	361	.....	3,641.00	....	980 15	....	10.08	.	2.715	.....	.269	.....
Seamsters	111	641	1,003.00	6,111.00	178 80	609 05	9.03	9.53	1.610	.950	.178	.099
Shipping clerks.	221	7	2,210.33	69.50	378 94	11 19	10 00	9 93	1.714	1.598	.171	.160
Sorters..........	156	122	1,549.00	1,148.00	271 38	131 92	9.92	9.40	1.739	1.081	.175	.115
Stenographers	4	28	37.00	236.50	5 75	38 58	9.25	8 44	1.437	1.377	.155	.163
Strippers	75	123	632.00	1,023.00	47 10	65 75	8.42	8.31	.628	.534	.075	.064
Structural workers.......	176	.....	1,760.00	....	297 80	....	10.00	.....	1.692	.....	.169	.....
Tailors..........	20	19	200.00	190.00	43 02	18 16	10 00	10.00	2.151	.955	.215	.095
Teamsters .. .	821	.....	8,202.50	....	1.470 06	....	9.99	.....	1.790	.....	.179	.....
Trimmers, ...	155	174	1,547.66	1,737.00	278 27	204 07	9.98	9.98	1.794	1.172	.179	.117
Upholsterers ...	122	16	1,220.00	160.00	232 96	9 09	10.00	10.00	1.909	.568	.191	.056
Wagon workers.	26	.....	212.00	.... .	58 55	....	8.15	....	5.251	.....	.276	.....
Waiters........	1	2	10.00	20.00	67	1 30	10.00	10.00	.670	.650	.067	.065
Watchmen......	257	.....	2,836.00	....	442 16	....	11.01	. .	1.720	.....	.156	..
Weavers	48	55	480.00	550.00	134 69	78 72	10.00	10.00	2.806	1.434	.280	143
Wheelwrights ..	37	.....	370.00	....	77 70	....	10.00	.....	2.100	.....	.210	.....
Woodsmen......	695	.....	7.250.00	....	1,101 25	....	10.43	.....	1.584	.....	.151	.....
Woodworkers...	408	....	4,070.00	.....	723 18	.. ..	9.97	. .	1.772	.....	.177	. ...
Wrappers	24	45	240.00	130.00	19 57	26 09	10.00	9.55	.815	.579	.081	.058
Yardmen........	181	.....	1,915.00	....	323 78	....	10 13	.....	1.713	.....	.169	. ...
Total........	39,528	6,021	391,213 13	58,463.00	73,337 98	5,159 43	9.97	9.70	1.855	.856	.186	.088

SUMMARY OF 324 OCCUPATIONS.

Other occupations	11,286	2,908	110,083.31	27,825.50	18,709 00	2,302 90	9.75	9.56	1.657	.791	.169	.083

SUMMARY TABLE.

Showing for the 51 leading industries and 1,079 establishments, amount and form of capital invested, value of raw material and supplies consumed, wages and salaries paid and value of products.

CAPITAL INVESTED.			VALUE OF PRODUCT AND EXPENSES.		
Classification.	Total amount.	Per cent.	Classification.	Total amount.	Per cent.
Land....	$21,730,718 89	....	Raw material used	$114,977,290 99	....
Buildings...........	19,790,357 02	....	Other supplies. ..	14,793,963 72	....
Machinery, etc	23,449,729 41	....	Wages	36.569,188 64	....
Material on hand, cash and other capital...:........	72,895,037 02	. ...	Salaries	8,283,171 00	....
			Other items...... .	48,831,857 36	....
Total............	$137,865,842 34	....	Value of product	$223,455,471 71	....

SUMMARY TABLE.

Showing for 51 leading industries and 1.079 establishments, number of persons, male and female, and total number and proportion in each class of employes, classified by weekly earnings received, together with the average wage per day received in each class and the total number of persons employed by months, and the range of employment in leading industries.

CLASSIFICATION OF WEEKLY EARNINGS.					AVERAGE WAGES PER DAY.			NO. PERSONS EMP. BY MONTH.		
	No. of Persons.									
Classification.	Male.	Female	Total	Per cent.	Male.	Female.	Total	Month.	No.	Range.
Under $5 00..	4,216	6,647	10,863	12.10	$.678	$.671	$.673	Jan...	76,695	94.55
$ 5 00 but under 6 00 .	1,554	1,527	3,081	3.43	.899	.868	.881	Feb...	77,397	95.41
6 00 but under 7 00..	3,453	1,901	5,354	5.96	1.037	1.011	1.027	Mar ..	78,644	96.95
7 00 but under 8 00..	5,200	573	5,773	6.43	1.255	1.245	1.254	April..	80,436	99.16
8 00 but under 9 00..	4,848	198	5,046	5.62	1.379	1.382	1.379	May ..	81,118	100.00
9 00 but under 10 00..	19,745	404	20,149	22.50	1.543	1.512	1.542	June .	80,417	99.15
10 00 but under 12 00..	15,013	170	15,183	16.92	1.771	1.741	1.771	July..	81.011	99.87
12 00 but under 15 00..	13,312	123	13,435	14.96	2.136	2.062	2.135	Aug ..	80,969	99.81
15 00 but under 20 00	8,874	32	8,906	9.92	2.731	2.684	2.731	Sept..	79,470	97.97
20 00 and over	1,941	3	1,944	2.16	4 550	3.625	4.549	Oct...	78,676	96.99
								Nov...	76,443	94.24
Total...............	78,156	11,578	89,731	100.00	$1.811	$.835	$1.665	Dec...	72,837	89.79
								Ave...	78,676	96.98

SUMMARY TABLE.

Showing for all industries reported, and 1,245 establishments, number of persons, male and female, and total number and proportion in each class of employes, classified by weekly earnings received, together with the average wage per day received in each class and the total number of persons employed by months and the range of employment in all industries and all establishments reported.

Classification of Weekly Earnings.					Average Wages Per Day.			No. Persons Emp. by Month.		
Classification.	No. of Persons. Male.	Female.	Total	Per cent.	Male.	Female.	Total	Month.	No.	Range.
Under $5 00	4,450	7,095	11,545	11.97	$.676	$.669	$.671	Jan ..	81,556	93.27
$ 5 00 but under 6 00	1,590	1,601	3,191	3.31	898	.868	.880	Feb...	82,058	93.78
6 00 but under 7 00	3,676	2,213	5,889	6.20	1.037	1.015	1.027	Mar...	83,455	95.37
7 00 but under 8 00	5,425	665	6,090	6.32	1.255	1.243	1.253	April .	86,326	98.65
8 00 but under 9 00..	4,967	218	5,185	5.37	1.379	1.378	1.379	May. ,	87,499	100.00
9 00 but under 10 00	20,338	420	20,758	21.52	1.542	1.512	1.542	June..	87,045	99.47
10 00 but under 12 00	16,541	180	16,721	17.34	1.770	1.737	1.769	July ..	87,330	99.79
12 00 but under 15 00..	14,578	134	14,712	15.25	2.131	2.057	2.131	Aug...	87,220	99.67
15 00 but under 20 00	9,634	39	9,673	10.03	2.732	2.693	2 732	Sept...	85,695	97.93
20 00 and over	2, 98	3	2,601	2.69	4.375	3.625	4.374	Oct .	85,008	97.15
								Nov .	82,629	94.43
Total............. ..	83,797	2,571	96,368	100.00	$1.828	$.841	$1.676	Dec...	78,500	89.71
								Ave.	84,527	96 60

SUMMARY.

Hours of Labor per Day.—The exact average number of hours of labor per day in the manufacturing industries is obtainable only for those establishments reporting in detail. The number of employes for which detailed returns were received amounted to 59,743 persons, or a little over 62 per cent. of the total number of all employes reported, both as to wages in detail and as to classified weekly earnings. Of the 59,743 employes reported in detail, 50,814 were male and 8,929 female persons. There were represented in all 381 occupations. Of these, 57 occupations embraced 45,549 persons, or about 76 per cent of all persons reported in detail. For 39,528 male persons in the 57 leading occupations the average number of hours labor per day was 9.97. For 6,021 female employes in 28 leading occupations the average was 9.7 hours per day. For all male employes in all occupations the average number of hours work per day was 9.91 hours. For all female employes in all occupations the average was 9.64 hours. For all persons, male and female, in all occupations the average was 9.87 hours work per day. For male workmen in manufacturing the 10-hour day is almost the universal rule. Notable exceptions in favor of shorter hours are: box makers, cigar makers, masons, plumbers, printers, and wagon makers, while longer hours are reported on the average for engineers, firemen, woodsmen and yardmen. Among female employes, hours of labor average about 16 minutes or 3 per cent less than among male employes. While the hours of labor for female employes are somewhat shorter than for males, the 10-hour day is almost as nearly universal for the former as for the latter.

Number of Persons Employed.—The total number of persons employed by all establishments reporting as to wages in detail or classified weekly earnings in the 51 leading industries was 78,156 male and 11,578 female, or 89,734 both male and female. The total number for which wages were reported in detail or in classified earnings for all industries was 83,797 males and 12,571 females, or 96,368 including both male and female employes. The total number of establishments reporting in the 51 leading industries was 1,079, and in the 9 lesser industries 166 establishments, making the total number of establishments reporting in all industries 1,245.

Rate of Wages.—The average wage per day for male persons in 57 leading occupations reported in detail was $1.855, and for female persons in 28 leading occupations reported in detail was $0.856. For all male employes reported in detail the average wage per day was $1.808, and per hour 18.16 cents. For all female employes reported in detail the average wage per day was $0.834 and 8.6 cents per hour. For all persons both male and female as reported in detail the average was $1.66 per day, and 16.75 cents per hour.

For all male employes reported as to wages in detail or classified weekly earnings the estimated average daily wage was $1.828, and for all female employes $0.841. For all employes, both male and female, reported as to wages in detail or as to classified weekly earnings the estimated average wage per day was $1.676.

By occupations, the highest average wage reported in detail among leading occupations for male employes was for plumbers at $3.391 per day and 38.2 cents per hour; the lowest, for strippers at $0.628 per day and 7.5 cents per hour. The highest average rate for any leading occupation for female employes was $1.598 per day and 16.0 cents per hour, received by shipping clerks; the lowest $0.534 per day and 6.4 cents per hour, received by strippers.

Classified Weekly Earnings.—Of the 96,368 employes reported in all weekly earnings classes, 83,797 or about 84 per cent were male employes. Of all male employes the largest number in any single class was found in the class receiving $9.00 but under $10.00 per week. The number in this class was 20,338 or about 24 per cent of all male employes. Of the female employes the largest number in any single class was found in the class receiving less than $5.00 per week. The number of female employes receiving weekly earnings of less than $5.00 per week was 7,095 or over 56 per cent of all female employes reported.

Of all employes, both male and female, the largest class was 20,758, or 21.5 per cent of the total, receiving weekly earnings of $9.00 but less than $10.00 per week. The second largest class was 16,721, receiving $10.00 but less than $12.00 per week. The third class in size embraced 14,712 employes, receiving $12.00 but less than $15.00 per week. These three classes receiving wages between $9.00 and $15.00 per week embraced in all 52,191 employes or about 54 per cent of all employes reported. The largest number of employes in any remaining class was 11,545 or nearly 12 per cent of all classes, in the class receiving less than $5.00 per week.

Range of Employment.—The returns for 1,245 manufacturing establishments for the year 1903 show a fairly constant condition of employment for that year. The highest number employed at any one time was 87,499 persons, which was the average number employed in the month of May. The smallest average number employed for any month was 78,500 in December. The average for the year was 84,527 persons or 96.6 per cent. of the number employed in May. If the number employed in May be considered to represent the condition of full employment, or 100, it is found that the lowest range of employment, i. e., December, is 89.71, representing the maximum range of unemployment as only 10.29. For all other months the range of employment is over 93. For eight months the range of employment stood above 95. For seven months it stood above 97. For five months it stood above 98, and for four months, May, June, July and August, the range of employment was from 99.47 to 100, or a condition of practically full employment prevailing through four months. During the seven months from April 1st to November 1st the average range of employment was 98.95, or nearly 99 per cent full employment.

DISTRIBUTION AND GROWTH OF MANUFACTURING INDUSTRIES.

Manufacturing in Wisconsin has in recent years been marked by very rapid and substantial growth. This progress has been in all respects such as henceforth to remove most branches of our manufactures from the category of experiment. That Wisconsin is even now the home of a vast manufacturing industry and that the development of the possibilities is still in its first beginnings are facts equally obvious to the student of industry. The lack of more general appreciation of these facts is due not so much to a want of figures and information as to lack of *availability* of the information. In the first place, facts necessary to a view of the situation in its proper perspective have not been brought together for that purpose. They are scattered and must be sought out in various sources such as census reports, labor and industrial reports and industrial journals, etc. The labor of bringing together and compiling such facts and statistics requires some special ability and often more time than is at the disposal of all persons who may have use for the information. Moreover, our study is one requiring statistical methods at almost every step and there is supposed to be a somewhat generous popular distaste for figures and statistics. These considerations contribute the principal causes why there is not manifest in our public press, in our public schools, in our legislatures and municipal councils and among the public generally in Wisconsin and the investing public everywhere a more general and better appreciation of the nature and importance of our manufacturing present and future—the solid magnitude of the beginnings already achieved and almost infinite possibilities yet to be developed. It is with this situation in mind and the purpose to ameliorate it in a slight degree that the following pages are prepared. It is hoped that the facts and statistics here brought together with deductions therefrom and conclusions offered may, in a general way at least, afford a basis for intelligent investigation and judgment of the industrial situations relating to manufactures in Wisconsin.

Statements of fact which follow in this relation, as well as the tables and statistics, are gathered from reliable sources and generally accepted authorities. Chief among these are the federal census, which furnishes figures for the main groundwork of this study, and the reports of the Bureau of Labor and Industrial Statistics of this state. With reference particularly to the lumber industry, the American Lumberman which, as an industrial journal, stands in a class by itself in point of gathering statistics, has furnished valuable statistical data. The matter of arrangement and relationship of the various facts and figures to bring out their true significance is, of course, a part of the task of compilation and it is believed it has been accomplished in a manner such as to give reasonably correct proportions and values in all important instances. Such conclusions or deductions as are offered in the textual part of the statement are only a part of the significance of the tables translated from figures to script. They do not attempt to exhaust the information in the tables which follow, but rather to serve as illustrations or examples of the manner in which that information may be read from the figures themselves.

Inasmuch as the federal census must afford the principal statistical data for our study, the time period particularly considered is properly the last census decade. In studying the importance, distribution, etc., of manufactures the measure generally here used is the gross value of products as reported in the federal census. While it is realized that the product basis is far from what might be desired, it is accepted as offering fewer objections than others that might be adopted. Net products would be much better than gross products, but the eleventh census does not give figures from which it can be computed. Caution must particularly be exercised in the comparison of different industries on this basis. The natural tendency will be to give undue importance to those industries engaged in the more elaborative or finishing process and which receive their materials in more or less advanced stage of manufacturing, such as sash and door manufacturers, etc., and also to those industries in which the cost of raw materials constitute a relatively large proportion of the value of the product, such as meat packing, flour milling, etc. Dr. Frederick S. Hall of the census department in a special report on the 'Localization of Industries" used the product or output basis for his article, and makes the following passing comment: "Caution is needed at several points in interpreting these tables. In the first place, practically all of the statistics given relate solely to the value of products, since this is in most cases the best single index of the relative importance of an industry in several localities. It will be readily seen, however, that even this is a defective unit of measure in so far as the materials used in an industry in one section are more expensive than those used in the same industry in another section." Within the limits of a single state this objection would hardly be valid. Provided the classification of the industry at two points was identical the materials used would be of about like kind and quantity, and the difference in the cost would hardly be more than a question of transportation between the two points. In a general way, the value of products will measure the distribution of the manufacturing industries in the state and indicate their importance and rate of growth. It is when we come to comparisons between different industries that the danger of misinterpretation becomes real. Even here it will probably be found that value of products form a basis sufficiently accurate for our purposes except in extreme types of industries of the two classes above named.

The important divisions into which the subject matter of this relation is self-divided and the order in which they are considered is as follows:

First. Manufacturing generally in Wisconsin and its distribution by counties at censuses of 1890 and 1900. Some special reference to the lumber industry is necessary at this point owing to its dominant importance in some localities and its migratory condition.

Second. Study of manufacturing in the state as a whole by specific industries with reference to relative importance and growth in the last census decade.

Third. Manufacturing industries in cities of La Crosse, Milwaukee, Oshkosh and Racine, 1890 and 1900, and in cities of Sheboygan and Superior at census of 1900, with some reference to localization.

Fourth. Urban manufactures in Wisconsin towns and cities of less than 20,000 population and manufactures outside of the towns and cities reported in the census under "Urban Manufactures."

Fifth. General resume of facts and conclusions and some more recent estimates.

MANUFACTURING GENERALLY AND DISTRIBUTION BY COUNTIES.

In the last census bulletin on manufactures in Wisconsin, Mr. North makes the following statement. "The remarkable growth of manufactures in Wisconsin is to be attributed to an abundant supply of materials and excellent market facilities. Manufacturing is not concentrated in a few localities but is distributed throughout the state. Six large rivers—the Menomonee, St. Croix, Chippewa, Wisconsin, Fox and Wolf—with many smaller streams, and nearly two thousand fresh water lakes in the northern part of the state, afford enormous water power as yet only partially developed. On the western boundary of the state are 250 miles of navigable river, while the Great Lakes extend for more than 400 miles along the northern and eastern borders. On the shores of Lake Michigan and Green Bay are 11 important manufacturing cities all accessible to lake going vessels; and the cities of Ashland and Superior, on Lake Superior, are large and growing manufacturing centers. In 1900 Wisconsin had 6,351 miles of railroads, which have contributed to the development of agriculture and manufactures."

For Wisconsin manufactures these two factors, raw materials and market facilities, have been far more important than all others combined. By far the most important of the materials with which the state is by nature endowed is its forests. The magnificent forests of Wisconsin have given her the father of her manufactures, the lumber industry. This industry, at some time or other, carried on over an area comprising easily two-thirds of the state has everywhere, in passing left behind young industries of more varied and permanent character. The most important of this natural material in the manufacturing history of Wisconsin is better appreciated when one realizes that in 1890 the sawed lumber product alone constituted 20.97 per cent of the total output of our manufactures and 15.97 per cent in 1900. Then recall that this product is merely rough lumber, raw material for dozens more of our most important industries, planing mills, sash and door manufactures, box and veneer factories, carpenter shops, car shops, cooperage, furniture and refrigerator factories, agricultural implements and wagon stock manufactures, etc., etc. These same forests furnish the pulp wood which has given us our great paper and pulp industry and the bark for our tanneries. The demand for machinery and appliances to be used in all the stages of manufacture from the forest to the finished article was a powerful impetus in the establishment of foundries and machine shops and the growth of manufacturing towns throughout the state wherever materials were available or could be easily brought or when market facilities were good, was instituted and fostered. With the growth of manufacturing centers comes diversity of manufacturing industries and with diversity comes solidity and permanence.

Market facilities for Wisconsin products is primarily a question of transportation. Transportation also enters in a most vital way into the conduct of manufacturing. The great burden bearers of our lumber industry in the past, and to a less degree at present, have been the streams and lakes and ponds on whose banks the timber grew. Our forest streams brought the logs to the mill and then drove the machinery that cut it into lumber. Modern developments have changed conditions. Steam is principally used now and the trees have been cut away from the waters' edge so far that logging railroads are indispensable to logging operations. But the importance of the log-drive and the mill stream can never be overestimated in the history of Wisconsin lumbering. Without them the industry and industrial development which depended upon it would be many years behind what they are today.

The Great Lakes and navigable rivers furnish cheap transportation facilities in Wisconsin. Especially is lake transportation important in connection with bulky, heavy commodities such as lumber, coal and iron. The value of river transportation is not so much what they carry as what they might carry. While not a great proportion of our freight is carried on these streams, they are still of much value as rate regulators, making it impossible for carriers to charge more than water rates between points connected by water. The railroad transportation facilities of Wisconsin are nowhere excelled. Even the almost unsettled districts in remote parts of the state have been penetrated by lines of railroad in search of lumber traffic. Most of the innumerable undeveloped water powers of the northern part of the state are accessible by railroad for manufacturing purposes. Extensions are made whenever business demands warrant. With the transportation problem minimized, the raw material at hand, and water power unlimited, who can say where the manufacturing greatness of Wisconsin will stop.

In 1890 the gross output of manufacturers in Wisconsin amounted to $248,456,164, and in 1900 to $360,818,942, an increase for the ten years of 45.2 per cent. In the same time the capital invested increased from $246,515,404 to $330,568,779, or 34.1 per cent; materials used, from $145,437,016 to $208,838,167, or 43.6 per cent; average number of wage earners employed, from 120,006 to 142,076 or 18.4 per cent and wages paid, from $42,958,267 to $58,407,597 or about 36 per cent. The greatest number of persons employed in manufactures in the last census year was nearly ten (9.4) per cent of the total population.

Milwaukee county produced 39.67 per cent of the state's manufactures in 1890 and 38.87 in 1900. The rate of increase in the census decade in Milwaukee county was about 45 per cent, or a small fraction less than for the state as a whole.

No other county produced as high as five per cent of the state's total. Racine stood next with 4.33 per cent in 1900 as compared with 3.61 per cent in 1890. The increase, 74 per cent, being much greater than for the state as a whole.

Winnebago county had an output of 3.84 per cent of the total in 1900. In 1890 this county produced 5.15 per cent of the state's output but although there was absolute increase of 7 per cent in the manufacturing products of Winnebago county in the census period the county lost rank because of the more rapid growth of the rest of the state.

The counties each producing two to three per cent of the state's manufactures in 1900 were Douglas, Kenosha, La Crosse, Marathon, Outagamie, Rock and Sheboygan. With the exception of La Crosse and Marathon all of these counties show increases more rapid than the state as a whole. La Crosse had practically no increase while Marathon had only an increase of 27 per cent.

The remaining counties in this class all had large percentages of increase and corresponding advances in rank. For Douglas county the per cent of increase was 217 per cent, Kenosha 195 per cent, Outagamie 60 per cent, Rock 95 per cent, and Sheboygan 290 per cent, which is the highest increase shown by any county in the state producing over .41 per cent of the state's output. Sheboygan county produced .99 per cent of the total in 1890 and 2.67 per cent in 1900.

Thirteen counties in the state produce between one and two per cent of the total product of manufactures for the state. Thirteen more produce .50 to 1 per cent. The remaining 34 counties produce less than .50 per cent each.

Ashland, one of the thirteen counties each producing 1 to 2 per cent of the total product of the state, was divided during the census period by the creation of Iron county out of its territory. If by addition of Iron county in 1900 Ashland county be reconstructed as it was in 1890 there will be an increase of 97 per cent or over twice as high a rate as for the state as a whole. Another county in this list shows a high rate of increase, Manitowoc, with 116 per cent increase. Of the remaining eleven, four show increases higher than that of the state as a whole. Five show increases less than the average and two show absolute decreases of 35 and 4 per cent respectively.

Of the counties producing less than 1 per cent each of the total product of the state in 1900, nineteen more than doubled their manufacturing output in the census decade. Eleven others show an increase higher than the state as a whole and eight show less increases. While for the remaining nine counties in this class there were decreases in the product of 1900 as compared with 1890.

The twenty-two counties, exclusive of Milwaukee county, which in 1900 produced over 1 per cent each of the state's manufactured products, produced in the aggregate 44.04 per cent of the total. This added to the output of Milwaukee county gives 82.91 per cent of the total produce of the state produced in twenty-three of the seventy counties in the state. The remaining forty-seven counties produce, therefore, only a small fraction over 17 per cent of the product of the state's manufactures.

Of the twenty-three counties producing 82.91 per cent of the state's manufactured products, ten are on the shores of the Great Lakes and Green Bay. These ten counties contribute 58.25 per cent of the total output. Three more of the counties in this list are located in the Fox River valley and contribute 8.31 per cent of the total. Two more are in the Chippewa valley and contribute 2.8 per cent of the product of the state. One, La Crosse county, is on the Mississippi river and produces 2.72 per cent of the total. The seven counties remaining are in the interior of the state and form two decided and compact groups. The first group, composed of Dane, Dodge, Jefferson and Rock, are all contiguous for a considerable portion of their boundaries and form the central section of the southern three tiers of counties in the state. This group of counties produced 6.4 per cent of the total manufacturing output of the state. The other group of interior manufacturing counties form a compact north and south section in the middle of the upper Wisconsin valley and produce 4.43 per cent of the state's total output.

It appears from this that, while, as Mr. North says, our manufacturing is distributed through the state," the distribution is not by any means even. The foregoing paragraph studying the location and relationship of the leading manufacturing counties brings out most forcibly the fact that there are parts of the state much more intensely manufacturing than others and suggests a more careful examination of those sections which appear to have somewhat the same industrial conditions or some important common industrial factor.

The Great Lakes (including Green Bay), with their cheap transportation facilities, are common factors in the industrial growth of fifteen counties. By examination it appears that these fifteen counties in 1890 produced manufactures to the value of $138,627,987 or 55.77 per cent of the total product of the state. In 1900 their produce was valued at $217,963,265, or 60.41 per cent of the total for the entire state. The increase for these counties as a group was 57 per cent for the period, as compared with an increase of 29 per cent for the rest of the state.

Four of the fifteen lake shore counties are on Lake Superior. Together these counties produced, in 1890, 3.66 per cent of the state's output; while in 1900 they produced 5.67 per cent. They show an increase for the census decade of 125 per cent.

If to the fifteen lake shore counties we add the four counties in the Fox River valley having direct water communication with Green Bay we will bring together the influence of lake transportation as a factor in locating industries in Wisconsin. While water power was more important in establishing industries in the Fox valley, the river as a potential carrier exerts a powerful influence in favor of manufacturing in this locality. Making this addition, we find that 68.96 per cent of the total product of manufactures in the state for 1900 were produced in the lake shore counties and those bordering on Green Bay or lying in the Fox River valley tributary to lake transportation.

In the middle of the southern part of the state there is a group of ten counties, embracing the westward bend of the Wisconsin river and extending south to the state line, north to the Fox River valley and eastward to the tier of counties on the shore of Lake Michigan in which a very considerable and diversified manufacturing industry is carried on. This group of counties produced in 1890, 8.32 per cent of the state's manufactured products. In 1900 their output was 9.5 per cent, showing a very marked increase for this group exceeding that of the state as a whole. All the counties in this group show high increases, falling below the average for the state in only two instances.

Another group of counties of importance from a manufacturing standpoint, lies in the upper basin of the Wisconsin river. This group may be said to embrace seven counties, though one of them lies partly in the Chippewa valley and is also partly drained by the Black river. However, its manufacturing is principally tributary to the Wisconsin valley. In 1890 these seven counties produced 7.77 per cent of our total product, and in 1900, 7.04 per cent. Thus, while there was considerable growth of manufacturing in this group during the census decade, the average increase was less than for the state as a whole. In two of the counties it was greater, but in one county there was an absolute decrease of 4 per cent in the output of the manufactures.

On the Mississippi river there are two counties of manufacturing importance. One, La Crosse, has already been considered separately. The other, St. Croix, produced in 1890, 1.28 per cent of our manufactured products and in 1900, .84 per cent. Thus, St. Croix county shows a decrease for the census period of 4 per cent in its output of manufactures.

The remaining counties of manufacturing importance are three in the Chippewa valley. In 1890 the product of these three counties amounted to 5.82 per cent of the total for the state. In 1900 it was 3.39 per cent, only one of the three counties showing a small increase for the ten years. For the group as a whole there was an absolute decrease of output amounting to 14 per cent.

For convenience of statement the distribution of manufactures on the basis of the foregoing paragraphs may be tabulated by groups as follows:

Group 1—Lake Shore and Fox valley, 19 counties, 68.96 per cent.

Group 2—Central Southern Wisconsin, 10 counties, 9.50 per cent.

Group 3—Upper Wisconsin River valley, 7 counties, 7.04 per cent.

Group 4—Mississippi River, St. Croix county; 1 county, .84 per cent.

Group 5—Mississippi River, La Crosse county, 1 county, 2.72 per cent.

Group 6—Chippewa valley, 3 counties, 3.39 per cent.

All groups—41 counties, 92.45 per cent.

Thus it appears that the remaining 29 counties, principally in the western and central portions of the state, produced but 7.55 per cent of the state's total of manufactured products.

The facts relative to the rate of growth of manufactures in these several groups may be summarized as follows:

Group 1—Per cent of increase, 53 per cent.

(12 counties show a higher increase than the state as a whole, 1 county practically the same as the state, four, less, and 2 show decreases.)

Group 2—Per cent of increase, 67 per cent.

(8 counties show a higher increase than the state as a whole, 2 counties less increases.)

Group 3—Per cent of increase, 30 per cent.

(3 counties show a higher increase than the state as a whole, 3 counties less, and 1 shows decrease.)

Group 4—Per cent decrease, 4 per cent.

Group 5—Per cent increase, none.

Group 6—Per cent decrease, 14 per cent.

(1 county shows increase less than average for the state, and 2 show decreases.)

Eleven counties in the state show decreases in the output of 1900 as compared with 1890. Six of these are found in the above groups. The remaining five decrease counties are scattered throughout the western and central parts of the state. A list of these eleven counties is as follows: Barron, Buffalo, Chippewa, Crawford, Door, Dunn, Jackson, Juneau, Lincoln, Oconto, St. Croix. The manufacturing of these counties has been principally the manufacture of lumber and the decrease in their output is unquestionably due, not to undesirability or unfitness for manufacturing generally, but to the exhaustion of the timber stands.

Insomuch as it appears that the same condition is primarily the cause for the failure of groups 3, 5 and 6, above described, to keep up with the rest of the state in industrial growth, it becomes very desirable to have some definite information as to the migration of the lumbering industry in Wisconsin. The American Lumberman, industrial and trade journal, compiles and publishes each year detailed statements of the lumber cut of the white pine district, the figures for white pine going back several years. Of late years statistics of other kinds of lumber are also gathered and compiled, but as these do not go back to the eleventh census year it is impossible to make the comparison include anything but the white pine cut. This, however, is by far the most important and will afford in a general way an index of the movement of the lumber industry as affecting the manufactures of the localities to be considered. Some difficulty is found in constructing a comparative statement by counties from the Lumberman's tables since the only divisions or districts recognized in its compilation are such as are natural and peculiar to the lumber industry only. The output of the large producing points is, however, given separately throughout each of the natural divisions or districts. This enables the construction of a table showing the output of political divisions by attributing to each county the sum of the product of all points designated and located within the respective counties. The difficulty arises when we come to the output of the small scattered mills. While the individual product of such mills is usually small, their aggregate output often amounts to a considerable sum. In the Lumberman's tables the product of such mills is lumped together for each district under the heading, "Other points," and as each such district embraces several counties it is impossible to say what proportion of the output of these "other points" should be attributed to each county in the respective years considered. In many instances, however, it seems safe to assume that the product from "other points" i. e. not designated, was a relatively small part of the output of the county and would probably bear a nearly constant ratio to the output at points designated, or the rest of the county, for the two census years.

On this basis the following table, embracing twenty-one of the lumber producing counties, about which information along this line is most to be desired, has been constructed. It is believed to be a safe basis for conclusions of a general character on the migration of the lumbering industry as affecting manufacturing generally in these parts of the state. For reasons already stated and because it leaves out of count the cut of hemlocks and hardwoods, this statement should not be considered or understood in any other connection.

CUT OF WHITE PINE LUMBER AND SHINGLES, 1889 AND 1899.

Cut at Points in Following Counties.	1889.		1899.		Per Cent. of Increase or Decrease.	
	Lumber, ft.	Shingles, M.	Lumber, ft.	Shingles, M.	Lumber, ft.	Shingles, M.
La Crosse	208,035	112,752	85,067	56,794	— 59	— 49
Crawford	15,150	6,133	....	....	—100	—100
Brown	40,500	27,500	43,489	10,260	7	— 63
Oconto	55,060	18,000	39,500	7,600	— 28	— 57
Marinette	249,300	56,951	192,117	110,980	— 23	95
Winnebago	98,163	55,190	54,944	37,267	— 44	— 34
Fond du Lac	11,300	1,500	2,502	....	— 78	—100
Eau Claire	183,211	99,044	87,557	59,921	— 52	— 39
Chippewa	55,004	16,485	60,618	15,180	— 10	— 7
Dunn	87,500	68,750	89,557	54,024	1	— 27
Barron	54,600	56,180	34,750	23,096	— 36	— 51
Juneau	35,000	19,350	....	....	—100	—100
Wood	69,300	49,500	30,080	1,450	— 56	— 97
Portage	49,150	19,700	7,035	8,280	— 85	— 83
Marathon	145,747	53,585	156,612	16,725	7	— 68
Taylor	15,000	10,500	400	....	— 97	—100
Lincoln	130,059	92,023	150,084	34,107	15	— 63
Ashland, Iron & Bayfield	74,347	35,119	354,211	16,224	376	— 53
Douglas	33,750	16,000	80,690	12,085	139	— 24

—000 omitted.

In group 1, the lake shore and Fox valley counties, there are ten counties requiring examination in regard to the movement of the lumbering industry. It will be remembered that Winnebago county, in the Fox valley, while it lost rank in manufactures in the last census decade, showed an absolute increase in its manufactured product of 7 per cent. This increase was achieved in spite of a very heavy loss in lumbering, its most important industry. As shown by the table there was a decrease in this county of 44 per cent and 34 per cent in its output of pine lumber and shingles respectively. This means for manufactures generally exclusive of lumber and timber products a very much higher rate of increase than would at first appear.

The same statement holds good for Fond du Lac county which suffered the loss of almost its entire lumber manufacturing during the census period and still made a gain in its total manufactures of 38 per cent.

Brown county, also in group 1, and a heavy lumbering county shows a gain of 72 per cent in the manufactures. From the lumber cut it appears that this remarkable increase is due entirely, or nearly so, to its diversified manufactures and not to its most important or lumber industry.

In Marinette county again the increase of 32 per cent in manufactures is due primarily to the growth of new and diversified industries. It is accompanied by a loss of 23 per cent in its cut of white pine lumber and a gain of 95 per cent in shingles.

Oconto county is one of the two counties in group 1 showing a loss of manufactures in the census decade. This loss in the case of Oconto county amounted to 13 per cent. In 1890, it may be safely estimated, that lumbering was more important than all other manufactures in Oconto county. Its loss of manufactures, it is almost safe to assume, is due entirely to the exodus of the lumber industry consequent upon the exhaustion of standing saw timber in this district. The decrease in the cut of white pine amounted to 28 and 57 per cent for lumber and shingles respectively.

The other decrease county in group 1 is Door county, on the peninsula between Lake Michigan and Green Bay. Door county shows a decrease of 10.7 per cent. While statistical evidence is lacking as to the relationship of the lumber exodus and this decrease, the general situation points to the probability of a condition similar to that in Oconto county.

The remaining lumber counties in group 1 are found on the Superior shore. Here the story is somewhat different. It will be recalled that these counties as a group show the enormous increase in manufactures of 125 per cent. Probably the most potent single impetus in this remarkable growth was the migration of the lumber industry. It comes naturally that these south shore counties as well as the north boundary counties further east, should be the last to be exploited of their timber stands. For the south shore counties this exploitation comes at a time most opportune for the upbuilding of a future most intensely industrial. While the bulk of the lumber industry is bound soon to pass, here, as it has elsewhere, these counties like Brown, Winnebago, La Crosse and other counties in the state, will come out of the transition period with industries newer, more diversified and therefore more substantial and permanent. The lumbering industry will not be missed in the volume of the output. Indeed, this region, lying, as it does at the very threshold of the richest deposits of iron ore in the known world and at the head of lake transportation has, it would appear, far better equipment for meeting with this loss than any other lumbering region in the state.

All the counties of group 2 are outside the lumbering section of the state and therefore do not come up for consideration in this connection.

Group 3 of manufacturing counties it will be remembered, lies in the upper Wisconsin valley. This is the very heart of the lumbering section of Wisconsin and all of these counties are engaged principally in the manufacture of lumber. The growth of manufacturing, however, in other lines, is in some counties apparently very marked.

Marathon county is central in this group, and from a manufacturing standpoint the most important. Its increase of 27 per cent in manufactures can hardly be attributed to lumbering, since in the cut of white pine the county barely holds up its record of the eleventh census year.

In Portage, Wood and Taylor counties the growth in manufactures is accompanied by substantial decreases in lumbering and in Lincoln county, which shows a decrease, the slight decrease is accompanied by a very questionable increase in the white pine cut.

For St. Croix county the figures are not sufficiently complete to warrant any detailed statement. In a general way the same conditions appear to hold good here, except that there is probably very little or no increase in manufactures generally outside of lumbering, and the decrease in lumbering would probably about account for that in manufactures in general. As the decrease amounts to only 4 per cent, it can hardly be considered significant of anything except lack of increase.

La Crosse county is a remarkable example of the wonderful adaptability of industrial Wisconsin. La Crosse was, at the eleventh census, a very heavy producer of lumber. The bulk of the timber stand of the Black River basin was driven down to La Crosse county to be cut into lumber. Cutting away of the timber on Black River brought the white pine cut of La Crosse county down from 208 million feet of timber and 112 million shingles to 85 million feet of lumber and 56 million shingles in a single census decade. At the end of the census period, La Crosse county appears with new, larger and more diversified industries and, in spite of the transition, without a loss in output. Such a transition is unquestionably an improvement and should enable the locality in the present census period to divest itself entirely of the lumbering business and report a substantial increase in productive power.

The remaining group of our manufacturing counties presents a somewhat mixed situation. Group 6, Dunn, Eau Claire and Chippewa counties, show as a group, a decrease of 14 per cent in manufactures, and at the same time a very marked decrease in the cut of white pine lumber, the principal industry. Eau Claire county presents the anomaly of reporting all the increase for the group in manufactures generally and, at the same time, the bulk of the decrease in lumber manufacturing.

It seems more than likely that Chippewa county has suffered a much greater loss of lumber output than is here shown, if not enough to cover the heavy loss in her total manufactured product. Dunn county's loss is less and is at least partly accounted for by the falling off in the lumber industry.

It was previously noted that eleven counties report a decrease in manufacturing output at the twelfth census. All of these counties were more or less engaged in lumbering at the eleventh census. From a study of the migration of the lumber industry it is seen that in at least six of these counties, Crawford, Oconto, Dunn, Barron, Juneau and Lincoln the decrease is due almost, if not quite, entirely to the exodus of the saw mill—to the exhaustion of timber supply—and not on account of any failure or demonstrated unfitness of the several localities for manufacturing generally. In Chippewa county there is no question that to a very considerable extent the same combination of circumstances prevails. While figures are wanting for specific demonstration of the proposition, the case of the remaining four counties follows very nearly by analogy. St. Croix, Buffalo and Jackson counties are adjacent respectively to Barron county, where the situation is so clear, and the Chippewa and Wisconsin valley counties reporting heavy falling off in the lumber cut. They are, or were, primarily lumbering counties and subject to the same exhaustive exploitation as the neighboring territory and with the same results for the time being. To what extent they will retrieve their productive capacity, of course, remains to be seen. In some instances, however, there can be no question, there has already been much done. As regards the remaining decrease county, Door, the analogy has already been drawn and no further mention is here necessary.

It might be well, before taking up the consideration of specified industries, to bring together in brief summary the gist of the preceding paragraphs which constitute part first of this study.

In the first place, the remarkable growth of our manufactures is in the main due to special advantages in raw materials, transportation and water power facilities. The forests constitute by far the greatest natural resource in the way of materials, giving us our pre-eminence in the lumber industry. The lumber industry still furnishes nearly 16 per cent of our manufactured products and part of this manufactured product in turn constitutes the source of raw material which gives us many more of our most important industries. To the timber supply are due also our paper and leather industries. Lumbering moreover, opens up the manufacturing future of the state on a broad basis and by creating local demand for machinery in the manufacture of lumber and the other lines of industry dependent on the timber products, and upbuilding manufacturing centers, fosters general industrial development tending towards diversity of industries with permanence and solidity in the industrial organization.

The state is rich in inland water powers and the navigable rivers and Great Lakes, constituting nearly two-thirds of its boundary, afford abundance of cheap transportation facilities and corresponding proximity to markets, while some interior streams are of value as regulators of transportation rates. A comparatively level topography with abundant materials for ties and road-bed make railroad building easy and the state is penetrated in all directions with over six thousand miles of the best railroad facilities.

The past census decade has witnessed enormous increases in all factors of production resulting, in 1900, in manufactured products valued at over 360 millions of dollars, an increase over the previous census of over 45 per cent. Over 38 per cent of the output comes from Milwaukee county, whose rate of increase was about the same as that of the state as a whole. The bulk of the rest of the output is distributed in 22 counties ranging in output from 1.10 to 4.33 per cent each of the total for the state and in the aggregate producing 44.04 per cent of the total. This, added to Milwaukee county, gives a total of 82.91 per cent of the state's product coming from 23 counties. Thus while a large part of our manufactures may be said to center in Milwaukee county, it is nearer correct to say that outside of this county the bulk of the manufacturing industry is distributed over about one-third of the state, in counties ranging in output from about four million to fifteen million dollars each annually.

An examination of the map location of the heavy producing counties shows that they are for most part arranged in well defined groups, each, in a way, enjoying some important common industrial factor or condition. If such counties be considered in groups it is seen that the most important group is on the lake shores. These counties number 15, producing, in 1890, 55.77 per cent of the state's total product, and 60.41 per cent in 1900, and showing an increase of 57 per cent as against 29 per cent for the rest of the state. The Fox River valley counties are properly tributary to the lake shores, being connected by water transportation and belonging in this group, making a total of 19 counties producing 68.96 per cent of the manufactured products of the state. Ten important manufacturing counties form a compact group in central southern Wisconsin. Their rapidly growing manufactures have a capacity of 9.5 per cent of that of the entire state. A third group forms the heart of the lumbering industry in the upper Wisconsin valley, where seven contiguous counties yield 7.04 per cent of the product of the state with moderate increase of output. La Crosse and St. Croix are important manufacturing counties on the Mississippi River. While in the Chippewa valley is found a group of three counties with a considerable manufacturing output but showing a slight decrease. Under these heads are brought into count forty of the seventy counties in the state, and an aggregate of 92.45 per cent of the total product of manufactures of the state, leaving 29 counties with a fraction over 7 per cent representing some scattered lumbering and small scale manufactures, chiefly custom work and repairing incident to demands of agricultural communities.

Growth of manufacturing is seen to be especially marked in groups 1 and 2; moderate in group 3; while for the remaining groups, embracing five counties, there is no increase or decrease of output. The counties reporting moderate increases or decreases are all in the lumbering district of the state, and an examination of lumber statistics shows the condition to be due to the migration of this industry consequent upon the depletion of the available saw timber, that manufacturing in these districts is passing through a transition period and that in some cases the industrial reorganization has involved a temporary loss of productive capacity. In many districts, however, the growth of manufactures generally has more than offset the loss in lumbering output and in a few instances, notably, La Crosse and Eau Claire counties where lumbering was the most important industry and where the loss was very heavy, it was met without a loss of output and with substantial gains in the diversity and character of manufacturing industries. Since this is a form of improvement in our manufactures, no less real because it cannot be measured, that is being experienced particularly throughout the lumbering section, it follows that the growth and prosperity of our manufactures is greater and more widely distributed than at first appears. In fact, it embraces practically the entire manufacturing field. The passing of the lumber industry in no sense signifies a less desirable or less fit locality for manufactures in general but rather leaves a soil fruitful in many conditions and in many respects promising of continued industrial prosperity.

Counties.	1890 product.	Per cent. of all.	1900 product.	Per cent. of all.	Per cent. of increase.
Adams	$64,436	.03	$87,303	.02	35.00
Ashland*	3,859,702	1.55	6,426,259	1.78	†
Barron	1,731,530	.69	1,480,220	.41	— 14.00
Bayfield*	2,429,142	.98	3,970,916	1.10	63.00
Brown*	3,303,688	1.33	5,686,186	1.58	72.00
Buffalo	570,127	.23	464,025	.13	— 18.00
Burnette	37,524	.02	173,954	.05	363.00
Calumet	614,850	.25	910,218	.25	48.00
Chippewa	7,005,236	2.82	4,537,176	1.23	— 35.00
Clark	774,261	.31	1,297,458	.36	67.00
Columbia	1,099,686	.44	1,278,616	.35	16.00
Crawford	646,128	.26	604,703	.17	— 6.00
Dane	3,885,498	1.56	5,892,362	1.63	52.00
Dodge	2,243,263	.90	4,012,429	1.11	78.00
Door*	1,084,155	.44	974,741	.27	— 10.00
Douglas*	2,815,820	1.13	8,933,218	2.47	217.00
Dunn	2,527,029	1.02	2,123,056	.59	— 15.00
Eau Claire	4,915,862	1.98	5,661,415	1.57	15.00
Florence	8,090	....	41,835	.01	404.00
Fond du Lac	5,029,758	2.02	6,993,880	1.94	38.00
Forest	176,990	.07	76,164	.04	‡
Grant	693,612	.28	1,307,495	.36	88.00
Green	801,808	.32	1,715,624	.22	114.00
Green Lake	729,896	.32	1,110,360	.31	52.00
Iowa	264,893	.11	1,469,227	.41	454.00
Iron*	....	....	1,185,581	.33	†
Jackson	2,183,080	.88	510,083	.14	— 76.00
Jefferson	4,073,393	1.64	5,129,707	1.42	26.00
Juneau	946,405	.38	785,687	.22	— 17.00
Kenosha*	2,691,218	1.08	7,944,813	2.20	195.00
Kewaunee*	435,777	.18	956,974	.26	119.00

Counties.	1890 product.	Per cent. of all.	1900 product.	Per cent. of all.	Per cent. of increase.
La Crosse	9,767,181	3.93	9,807,887	2.72	....
Lafayette	341,745	.14	822,153	.23	140.00
Langlade	980,387	.39	1,289,081	.36	31.00
Lincoln	4,749,768	1.91	4,554,192	1.31	— 4.00
Manitowoc*	2,271,473	.91	4,785,576	1.32	116.00
Marathon	5,844,949	2.35	7,463,116	2.07	27.00
Marinette	5,281,660	2.12	6,972,616	1.93	32.00
Marquette	218,927	.09	441,743	.12	101.00
Milwaukee*	98,598,451	39.67	140,252,383	38.87	45.00
Monroe	585,589	.24	1,594,664	.44	172.00
Oconto*	3,005,772	1.21	2,597,916	.72	— 13.00
Oneida	1,433,096	.58	3,139,307	.87	‡
Outagamie	5,688,586	2.29	9,127,604	2.53	60.00
Ozaukee	1,405,532	.57	1,980,197	.55	41.00
Pepin	129,630	.05	261,823	.07	102.00
Pierce	944,175	.38	1,118,421	.31	18.00
Polk	330,736	.13	1,221,507	.34	269.00
Portage	1,927,875	.77	2,819,263	.78	46.00
Price	1,129,473	.45	1,682,131	.46	49.00
Racine*	8,973,663	3.61	15,643,783	4.33	74.00
Richland	451,384	.18	795,448	.22	76.00
Rock	4,147,975	1.67	8,090,447	2.24	95.00
St. Croix	3,175,977	1.28	3,028,821	.84	— 4.00
Sauk	915,600	.37	1,876,650	.52	105.00
Sawyer	830,148	.33	984,198	.27	18.00
Shawano	1,119,002	.45	1,770,751	.49	58.00
Sheboygan*	2,471,871	.99	9,652,106	2.67	290.00
Taylor	835,438	.34	2,152,671	.60	157.00
Trempealeau	607,466	.24	1,111,882	.31	83.00
Vernon	410,377	.16	709,669	.19	72.00
Vilas	....	....	1,875,130	.52	‡
Walworth	2,105,046	.89	2,515,872	.69	19.00
Washburn	262,817	.11	818,018	.23	211.00
Washington	850,918	.34	1,808,599	.50	112.00
Waukesha	993,766	.40	2,292,786	.63	131.00
Waupaca	1,452,117	.58	1,936,737	.54	33.00
Waushara	204,124	.08	447,050	.12	119.00
Winnebago	12,913,825	5.15	13,848,239	3.84	7.00
Wood	3,546,725	1.43	3,787,275	1.05	7.00
Total for state	$248,546,164	100.00	$360,818,942	100.00	45.00
Lake shore counties	$138,627,987	55.77	$217,963,265	60.41	57.00
All other counties	109,918,177	44.23	142,855,677	39.59	29.00

*Lake shore counties.
†Ashland and Iron; per cent. increase 1890-1900, 97 per cent.
‡Forest, Oneida and Vilas; per cent. increase 1890-1900, 215 per cent.
—Decrease.

CUT OF WHITE PINE LUMBER AND SHINGLES IN WISCONSIN.

(,000 omitted.)

Locality.	1889		1890.	
	Lumber, ft.	Shingles, M.	Lumber, ft.	Shingles, M.
Mississippi River:				
La Crosse	172,100	94,366	67,817	49,375
Onalaska	25,935	18,386	17,250	7,419
Prairie du Chien	15,150	6,133	....	....
Total	213,185	118,885	85,067	56,794
Omaha Line:				
Fairchild	20,300	12,000	20,000	3,000
Warren Mills	10,000	....	500	....
Cumberland	19,300	26,000	7,750	4,489
Baronette	13,000	13,180	....	....
Shell Lake	25,000	12,000	28,850	6,350
Rice Lake	22,300	17,000	27,000	18,607
Hayward	35,547	13,498	43,807	5,499
Drummond	27,705	15,342	21,005	1,548
Mason	28,699	8,081	39,583	5,133
Other points	49,610	25,031	25,001	5,839
Total	251,462	142,133	213,496	50,465
Green Bay Shore:				
Green Bay	40,500	27,500	43,489	10,260
Oconto	55,060	18,000	39,500	7,600
Peshtigo	57,308	6,340	17,965	9,475
Marinette	191,992	50,611	174,152	101,515
Other points	14,033	6,000	1,035	12,300
Total	358,893	108,451	276,141	141,150
Miscellaneous:				
Bayfield	14,991	346	35,843	....
Big Wausaukee	19,000	3,000	17,000	10,000
Dunbar	10,000	....	....	....
Mannville	12,030	4,800	....	....
Necedah	35,000	19,350	....	....
Washburn	80,456	16,355	123,793	28,692
Other points	77,794	79,035	10,082	31,750
Total	249,272	122,886	186,718	70,442
Chippewa Valley:				
Chippewa Falls	55,004	16,485	60,618	15,180
Eau Claire and vicinity	162,911	87,044	67,557	56,921
Stanley	....	....	34,000	6,000
Badger Mills	12,000	6,500	....	....
Menomonie and vicinity	75,500	68,750	89,557	54,024
Total	305,415	178,779	251,732	132,125
C., M. & St. P.-Wis. Val. Div.				
Tomahawk	18,500	17,000	34,850	3,400
Merrill	111,559	75,023	115,231	30,967
Wausau and vicinity	103,229	36,450	112,700	12,259
Schofield	24,893	8,135	20,000	3,000
Mosinee	17,625	9,000	23,912	1,466
Vesper	17,500	12,000	....	....
Port Edwards	11,000	12,500	....	....
Goodyear	17,000	12,000	28,000	....
Other points	50,740	18,300	80,644	17,218
Total	372,047	200,408	214,340	68,050

Locality.	1889.		1899.	
	Lumber, ft.	Shingles, M.	Lumber, ft.	Shingles, M.
Chicago & Northwestern:				
Kelley	15,703	6,500	....	....
Antigo	41,865	11,500	3,000	6,700
Parrish	17,000	12,500	....	....
Harrison	19,573	13,750	....	....
Rhinelander	44,079	21,137	96,002	6,175
Watersmeet	15,000	20,000	....	....
Hurley and vicinity	21,000	27,000	....	....
Other points	80,586	133,962	16,691	91,038
Total	254,807	246,350	115,693	103,913
Wolf River:				
Oshkosh	88,763	46,190	54,794	36,692
Fond du Lac	11,300	1,500	2,502	....
Omro	3,000	....	150	575
Winneconne	6,400	4,000	....	....
Total	109,463	56,690	57,446	37,267
Wis. Central R. R.:				
Stevens Point	49,450	19,700	7,035	3,280
Sherry	11,000	5,000	....	....
Marshfield	12,800	8,000	2,080	1,450
Rib Lake	15,000	10,500	400	....
Prentice	16,000	11,000	....	....
Phillips	30,000	12,000	....	....
Coolidge	10,000	7,000	....	....
Bad River	18,000	....	....	....
Ashland and vicinity	63,347	8,119	354,211	16,224
Other points	67,062	51,023	24,989	64,419
Total	292,359	132,343	388,715	85,373
Duluth Dist.:				
West Superior	....	....	76,690	12,085
Other points	33,750	16,000	4,000	....
Total	33,750	16,000	80,690	12,085

SUMMARY.

Localities and Districts.	Cut 1889, —,000 omitted.		Cut 1899, —. 000 omitted.		Per Cent. of Increase or (—) Decrease.	
	Lumber, bd. ft.	Shingles, M.	Lumber, bd. ft.	Shingles, M.	Lumber.	Shingles.
Green Bay	358,893	108,451	276,141	141,150	—23.00	30.00
Wolf River Dist.	109,463	56,690	57,446	37,267	—47.00	—34.00
C. &. N. W. R. R. Antigo to Hurley, inc.	254,807	246,350	115,693	103,913	—54.00	—57.00
C., M. & St. P.—Wis. Val. Div.	372,047	200,408	415,340	68,050	12.00	—66.00
Wis. Central R. R.	292,359	132,343	388,715	85,373	33.00	—35.00
Omaha Line	251,462	142,133	213,496	50,465	—14.00	—64.00
Chippewa Valley	305,415	178,779	251,732	132,125	—17.00	—26.00
Mississippi River	213,185	118,885	85,067	56,794	—60.00	—51.00
Superior and vicinity	33,750	16,000	80,690	12,085	130.00	—24.00
Miscellaneous	249,272	122,886	186,718	70,442	—25.00	—42.00
Total	2,440,653	1,322,925	2,071,038	757,664	—15.00	—42.00

SPECIFIED INDUSTRIES.

Under this heading it is purposed to review in a brief way the condition and progress of some of our leading industries as shown at the last two censuses. The census bulletin on manufactures for Wisconsin reports 154 specified industries. Since space is wanting for a detailed statement of each of these, this consideration will be limited to separate statements of about one-third the number, embracing the more important. Some of the less important industries will be considered in groups in less detail. The ranking of different industries on the product or output basis it must be remembered, can be accepted only in a most general way. As regards growth, scale of production, and other considerations of interest in this connection, however, this basis is as satisfactory as any that might be adopted.

AGRICULTURAL IMPLEMENTS.

This industry has practically come into existence in the United States in a little over half a century. The use of improved machinery in agricultural pursuits is a step in industrial development due to American conditions and American genius. In 1850 the output of Agricultural Implements in this country was valued at $6,842,611, and in 1900 at $101,207,428. The farm machinery of the United States has, through its superior quality and general excellence, become the standard for the entire civilized world. The state of Wisconsin is well supplied with one of the most important materials for the manufacture of agricultural implements, namely first class hardwood timber. The other important materials are iron, steel and coal. Our lake transportation places us in a very favorable position with regard to supplies of these materials, and an excellent railroad system, radiating throughout the prosperous agricultural section of the Mississippi basin, gives us unexcelled market facilities.

In 1890, Wisconsin was ranked fifth among the states in product of agricultural implements, and by 1900 she had advanced to fourth place. Our output amounted in 1900 to 7.8 per cent of the product of the entire United States. Of all the cities in the country of 20,000 population, or over, in 1900, Racine ranked third, and Milwaukee seventh in the output of agricultural implements. The agricultural implement output of Wisconsin is of a very diversified character. An important branch of the industry is the manufacture of grain threshers and separators, of which Wisconsin produces about one-half the product of the United States. According to census, Wisconsin ranks "second in horse hay-forks, fourth in cultivators, harrows, planters and drills, harvesters and combined harvesters and binders, and mowers, and seventh in plows and horse hay-rakes."

In 1890, there were 51 establishments in Wisconsin with a product of over five million dollars, or 2.02 per cent of all industries. In 1900, the number of establishments was the same but with a product over 57 per cent greater and equal to 2.18 per cent of all industries. This would indicate three very important conditions,—first, a very marked growth in the industry; second, some increase in its relative importance; and third, a very marked tendency towards large-scale production if not centralization; all of which promises much for the future of the industry. The timber supply is plentiful, coal and iron are readily available and with an increasing home demand and constantly improving facilities for reaching the western market there is no apparent reason why our agricultural implement business should not continue in its present condition of growth and general prosperity.

BLACKSMITHING AND WHEELWRIGHTING.

This industry is principally auxiliary to teaming and farming. Its growth during the past census decade is incident, somewhat, to the rapid spread and growth of agricultural occupation throughout the state. In 1890 there were 798 establishments with an output of $1,256,076, or .50 per cent of all industries. In 1900 there were nearly twice as many establishments with an output of $2,442,141, or .67 per cent of all industries. Thus it appears that this industry increased in product very rapidly and made a substantial gain in rank. Moreover, it appears that this growth comes from the large increase in the number of concerns or establishments. Since it is probable that a large number of these new establishments located in the newer and less wealthy communities, it comes naturally that there should be no increase or a decrease in the average product per establishment.

BOOKBINDING AND BLANK-BOOK MAKING.

This industry is one depending largely on the growth of the general reading public and commercial development. In 1890 we had 23 establishments with a product of $205,938, and in 1900, 27 establishments with output valued at $593,365. The industry just doubled its relative importance. There was an increase of about 150 per cent in the average output per establishment.

BOOTS AND SHOES, FACTORY PRODUCT.

The manufacture of boots and shoes is fast becoming one of Wisconsin's most important industries. Its growth in the past census decade has been something enormous. In 1900, Wisconsin ranked tenth among the states in value of boot and shoe products and among cities of the United States of 20,000, or over, population, Milwaukee ranked twenty ninth. Outside of the fact that a large quantity of leather is tanned here, Wisconsin offers to this industry one important advantage not offered to manufacturers generally. The introduction of high-grade machinery and development of specialization and piecework has brought about the employment in this industry of an increasingly large proportion of labor by females and young persons. The industry has become, in a slight degree at least, a parasite industry. Mr. E. A. Ross in an instructive article on location of industries in the Quarterly Journal of Economics puts this idea in the following words, "Sometimes a trade takes up its home where, as supplement to some other branch, it can fill up an industrial chink." At Milwaukee, for instance, we have employed a large amount of adult male labor in the manufacture of agricultural implements, in foundries, machine shops, rolling mills, furniture factories, etc., and in this respect Milwaukee is only a prototype of many smaller cities in Wisconsin. This would mean a great many families and many women and children offering a supply of cheap labor to any form of industry capable of using it. Says Marshall in his "Principles of Economics," "Where metallic and engineering works naturally congregate, industry offering some work of lighter character, whether hand work or machine tending, suitable to busy women and children, will be apt to appear." This principle is, of course, not limited in its application merely to communities where "metallic and engineering works naturally congregate" but is equally true of any industrial group brought together for some length of time by employment of adult male labor. Says Hobson, in "The Evolution of Capitalism," "As textile work passes more and more into the hands of women, this tendency to make it a parasite trade, thriving upon the low wages for which women's labor can be gotten where strong and well-paid male work is established will probably be more strongly operative." To quote Mr. Ross' article again. "This is true also of ship-building towns and mining and agricultural centers near textile districts. In all these cases the industry strikes root wherever there is unused labor power in some members of the family." It is not necessary that an industry employ *only* this class of labor to be acted on in the selection of its location by this principle. Of course, the force of this consideration in such selection will vary with the proportion of such labor employed. In the shoe industry in Wisconsin only about five-twelfths of all persons employed are women and children. But, other things being equal, the availability *of* this supply of labor would determine the location of the industry. The boot and shoe industry finds in Wisconsin its raw materials and excellent distributing facilities. It has become established here in many places where there is suitable available labor supply and its growth and future prosperity, it would seem, depends merely on that of the industrial community. In 1890 we had 32 establishments with a gross output of $2,972,233, or 1.19 per cent of all industries. In 1900 there were 40 establishments with a product of $4,791,684, or 1.33 per cent of all industries. The growth of this industry has, therefore, been very rapid in this period. It has also advanced in relative importance. The average output per establishment indicates a very considerable progress towards production on a large scale.

BOXES, WOODEN PACKING.

The extensive manufacture of wooden packing boxes, crates, etc., is a direct outgrowth of our lumber industry. To a certain degree it represents utilization of by-products and waste materials of saw and planing mills. The growth in the past census decade has been incident largely to the growth in these industries and increased commercial activity creating a larger demand. In 1890 we had 24 establishments with a product of $781,105 or .31 per cent of all industries, and in 1900, 38 establishments with output valued at $1,989,663, or .55 per cent of the total. This, therefore is another industry showing a large absolute increase and rapid growth in relative importance, while the product per establishment shows that the new enterprises have entered the field with larger scale equipment than was common previously.

BRASS CASTINGS AND FINISHINGS.

These industries and brassware are another evidence of the adaptability and diversity of manufacturing opportunities in Wisconsin. In 1890 there were reported 5 establishments engaged in the manufacture of brass castings and finishings, the total product amounting to $370,451, or less than $75,000 per establishment. In 1900 there were 10 such enterprises reported with a gross product of $888,755 or nearly $90,000 product each. In 1890 there were no manufactures in brassware reported, and in 1900 we had 3 establishments with an average output of over $200,000 each.

BREAD AND OTHER BAKERY PRODUCTS.

The number of bakery establishments reported for 1890 was 256, with a product valued at $2,064,288. In 1900 there were reported 430 establishments with a product of $3,619,288. The industry shows an increase greater than the average for all industries, being in 1900 a little over 1 per cent of the total of manufactures. There is also a slight increase in the average output per establishment.

BRICK AND TILE.

Wisconsin abounds in deposits of available brick clays of a generally high degree of excellence. Clay suitable for the manufacture of tile is a natural deposit also found in many localities. The brick and tile industry has undoubtedly seen its worst days in Wisconsin. In the past, it has had to compete with cheap lumber and other building materials. The high price of strong male labor, which represents the principal element in cost of production, especially on a small scale, had prevented the industry from developing its full capabilities. Remoteness of some of the best clay deposits from the markets and inadequate transportation facilities have also been drawbacks in the past. The chief factor in overcoming these disadvantages has, in the main, been the high quality of some of the clay deposits, which has enabled the industry to grow in spite of them. In 1890 there were 137 establishments reporting a product of $1,642,465, and in 1900, 168 establishments with a product of $1,795,993. It would seem that the increasing scarcity of lumber for building purposes and the demand for fire-proof structures in our cities would improve our markets and prices. This together with our improved transportation facilities, if accompanied with reasonable rates, and the adoption of improved labor-saving machinery and production on a larger scale, ought to offer many opportunities for profitable undertakings in this industry.

CARPENTERING.

The number of carpenter shops reported in 1890 was 367 with a product valued at $5,798,939, or 2.33 per cent of all industries. In 1900 we had 665 establishments with a total output of $7,115,245, or 1.97 per cent of all industries. While there was a considerable increase in the total gross product there was also a falling off in rank or relative importance, and a decrease of about 30 per cent in the average output per establishment.

CARRIAGE AND WAGON MATERIALS.

For most part, the manufacture of wagon and implement stock from sawed lumber is carried on by the manufacturers of the wagons and implements themselves. The industry, however, shows a considerable increase in output and some gain in rank. The increase in product is due to increased size of some enterprises as there is a decrease from 13 to 10 in the number of establishments reporting at the last two censuses.

CARRIAGES AND WAGONS.

This industry is directly an outgrowth of the available supply of first class hardwood timber and a good market. The kind of vehicle produced in largest numbers is probably the heavy farm wagon. In 1900, Wisconsin ranked seventh among the states in the value of output of carriages and wagons, producing 5.7 per cent of the total product of the United States. There has been an increase, during the census period, in the state's product from $5,947,499 to $6,956,341, a good, substantial increase, though less than the average for all industries. There is apparently a considerable change in the character of the industry as regards the scale of production. There has been a decrease from 500, in 1890, to 436, in 1900, in the number of establishments, and an increase in the product per establishment from $11,895, to $15,955, showing a decrease in that branch of the industry represented by the small shop making only a few vehicles at a time for custom trade.

CARS AND GENERAL SHOP CONSTRUCTION BY R. R. COMPANIES.

This industry is largely an incident of the general growth and industrial prosperity of the state and particularly of the railroad development. In 1890, there were 22 railroad car repair and construction shops in the state. The value of the products was reported as $2,221,152, or a little over $100,000 each. In 1900 the number of establishments had increased to 46, and the product $6,306,823, or $137,105 per establishment. Thus the number of establishments increased over 100 per cent, the products nearly 200 per cent, and the products per establishment over 35 per cent.

CHEESE AND BUTTER.

In 1900, Wisconsin ranked second in the United States as a dairy state. The great dairy interests of Wisconsin are so often and thoroughly discussed publically as not to need any special mention here. In 1890 there were 966 creameries and cheese factories in Wisconism, and in 1900, 2,018. In 1890 the product was valued at $6,960,711, and in 1900, $20,120,147. In 1890 it was 2.81 per cent of the value of all our manufactured products, and in 1900, 5.57 per cent. The average product per establishment increased from $7,206 to $9,970.

CHEMICALS.

The manufacture of chemicals in Wisconsin is one more instance of the diversity of our industries. In 1890 there were 6 establishments with a total product of $184,807 or $30,801 each, and in 1900, 4 establishments with an output valued at $254,196, or $63,549 each, showing a considerable tendency towards large scale productions.

CLOTHING, MEN'S—FACTORY PRODUCT.

This is another one of those industries which is affected in a marked degree by the parasite principle, over three-fourths of the persons employed being women or children. There is noticeable a very marked increase in this industry in the number of small establishments. The total number of establishments in 1890 was 27 with a product of $3,909,726, or an average of $144,804 each. In 1900 the number of establishments was 89 and product $4,393,092, or on the average about $49,361 each. While the industry shows an absolute increase in product, it lost considerable in relative importance.

CLOTHING, WOMEN'S—FACTORY PRODUCT.

An industry of the same general characteristics as the above is the factory manufacture of women's clothing. During the past decade it has exhibited practically the same tendencies as those noted above for the manufacture of men's clothing, except that it has not only suffered a loss in rank and in average output per establishment, but in the total value of products as well.

CONFECTIONERY.

This industry is to a very marked degree parasite in character. About two-thirds or more of the persons employed are women and children. The industry locates generally wherever there is a supply of cheap labor and good market facilities. The census shows an increase in the past census decade from 38 to 56 in the number of establishments and from $1,195,375 to $1,570,445 in the total value of products. There is a slight decrease in the relative importance and the average size of establishments.

COOPERAGE.

This is one of the industries which is a product of our timber supplies. For most part the manufacture of cooperage and cooperage materials in Wisconsin is conducted on a small scale. But the aggregate value of products of the several establishments amounts each year to over a million and a half of dollars. In 1890 the number of establishments was 140, with total gross product of $1,527,008, or .61 per cent of all industries. In 1900 the number of establishments had decreased to 126, but the value of products was $1,683,180. This was, therefore, a substantial increase in the average product per establishment.

COTTON GOODS.

The manufacture of cotton goods seems to be on a decline in Wisconsin during late years. In 1890 there were 4 establishments reported with a product of $620,190, while in 1900 only 3 mills reported with a total product of $316,061. Thus it appears that the loss of one in the number of establishments has involved a loss of nearly one-half of the total productive capacity and a decrease from $155,049, to $105,354 in the average output per establishment. The industry is one which locates in Wisconsin primarily for the sake of cheap labor and power, and good markets. It would hardly appear likely, however, that any intelligent judgment as to the adaptability of this state for a given industry could be rendered on the basis of the experience of so few enterprises.

ELECTRICAL APPARATUS.

The adaption of electricity to every-day utilities is a very modern invention. The spread of its application has been something phenomenal. The demand for special machinery and electrical appliances has given birth to a new industry. A part, as yet small, of this industry has been attracted to Wisconsin by market facilities and general advantages here offered for manufacturing for the western and northwestern markets. In 1890 there were 3 establishments reported under this head. The total value of products amounted to $38,870, or about $12,956 per establishment. In 1900 the number of establishments had increased to 7, and the value of products to $923,587, and the average output per establishment to $131,941.

FLOURING AND GRIST MILL PRODUCTS.

Flour and grist milling is one of the most important of Wisconsin's industries. The principal factors in its location here are water power, material and markets and also as auxiliary to agriculture and stock raising. Especially of recent years has there been a very marked increase in the number of smaller mills engaged chiefly in custom feed grinding in farming communities. Flour milling on a large scale is also becoming more important, in many places growing up to utilize capital and power sites left idle by the departure of the lumber industry. In 1900, Wisconsin ranked eighth among the states in the production of flour, with a product of 4,750,253 barrels annually. In 1890 there were reported 497 flour and grist milling establishments with a total gross product of $24,252,297, or 9.76 per cent of all manufactures. In 1900 there were 717 mills with a total output of $26,327,942, or 7.30 per cent of all industries. The decrease in the average product per establishment is probably due to the increased number of small enterprises in the newer agricultural sections of the northern part of the state.

FOUNDERY AND MACHINE SHOP PRODUCTS.

The remarkable growth attendant upon this important industry in Wisconsin in the past census period is one of the most encouraging things about the industrial outlook. The industry is one whose very existence betokens a settled and established manufacturing community. When the demand for manufacturing appliances has become so well settled that a community takes to making its own machinery, the manufacturing of that community is no longer a matter of experiment. In no small degree is the success of this industry in Wisconsin due to the immigration of skilled mechanics from north Europe, particularly from Germany. Iron and steel, the raw materials, are produced in Wisconsin in considerable quantities, while fuel is brought cheaply by the lakes or only a short distance overland from the coal fields of Illinois. Wisconsin is sought by this industry also because of our excellent distributing facilities both by water and rail. The industry does not depend upon the home demand but makes machinery for the United States and foreign markets as well. Many important instances are known of Wisconsin having made machinery exported for use in the oldest manufacturing centers of industrial Europe. In 1890 there were 155 establishments reported under this head. The product was valued at $8,467,290, or 3.41 per cent of all industries in the state. The average output per establishment was $54,627. In 1900 there was an increase to 272 establishments with a total product valued at $22,252,730, or 6.17 per cent of all industries. The average output per establishment increased to $81,811, or about 50 per cent, showing a considerable increase in the scale of production in the additional enterprises.

FURNITURE.

The great furniture industry of Wisconsin is one of those for which we are primarily indebted to our bountiful supply of hardwood timbers. In many places also water power furnishes a cheap source of motive energy for the conduct of this branch of our manufactures. Of great importance also to this industry are our excellent distributing facilities particularly to the west and southwest. In 1890 there were reported in this industry 46 furniture and chair factories with a gross annual product of $3,616,517, or 1.46 per cent of all industries. The average product per establishment was $78,620. In 1900 the number of establishments was 78, with a gross product of 8,721,823 or 2.42 per cent of the total for all industries. The average output per establishment amounted to $111,818. Thus, there was an increase of nearly 70 per cent in the number of establishments, 141 per cent in total product, and 4.2 per cent in the average capacity of the establishments. The industry, moreover, advanced in relative importance from 1.46 per cent in 1890, to 2.42 per cent of the total of all industries in 1900.

GLOVES AND MITTENS, HOSIERY AND KNIT GOODS.

These two industries are largely parasitic in character. They are located in Wisconsin chiefly in communities having founderies, machine-shops and metallic and lumbering or woodenware industries or on a smaller scale in agricultural centers. The glove and mitten industry reported in 1890, 13 establishments with a total product of $162,123, and in 1900, 19 establishments with a total product of $507,495. Thus, this industry doubled its relative importance and its average product per establishments. In hosiery and knit goods there were reported in 1890, 23 establishments with a gross output valued at $1,635,641, and in 1900, 27 establishments with a product of $2,486,813, showing an increase of 4 in the numbes of establishments and of 32 per cent in the total output, and nearly 30 per cent in the average product per establishment. The industry more than maintained its relative importance.

IRON AND STEEL.

Although Wisconsin has neither iron nor coal mines, the location of this industry within her borders is to a very considerable degree due to rational economic causes. In the first place, the Superior ore deposits are very near our boundaries. Some of the large industrial centers nearest them are within our territory. Our most important manufacturing centers are placed in easy and cheap communication with them through lake transportation and effcient railroad service with transportation rates controlled by the water carriers. The distance from the Illinois coal fields is comparatively short and the Wisconsin manufactories are directly between these two important sources of materials, the iron on the north. and the coal on the south, with only a short haul to either. On the other hand, coal is laid down at our lake ports from the Pennsylvania mines at a low cost of transportation as return cargoes of our carrying ships. Another important item of tonnage in the materials used in the manufacture of iron is limestone for fluxing material. Suitable fluxing material is plentiful in Wisconsin. This, together with the ore. which is mined on our borders so to speak, constitutes about two-thirds of the tonnage of materials used in the manufacture of pig iron. Their ready availability, the nearness of Illinois coal mines, on the one hand, and water communication with the great coal docks of Pennsylvania, on the other, taken in connection with our advantages of suitable climate and unsurpassed market facilities, should give Wisconsin importance in this industry. It is believed that were the industry in a competitive condition such would be the case. But under the present conditions older vested interests elsewhere afford an artificial check to the natural development of this industry in Wisconsin. In 1900, Wisconsin ranked tenth of the states in iron and steel industry and of the cities in the United States of 20,000, or over, population, Milwaukee ranked twenty-second in the output of iron and steel. In output of iron alone, Wisconsin ranked ninth with a product of 217,451 gross tons, pig iron constituting about 70 per cent of the total tonnage of our iron and steel output. In 1880 the total gross tonnage of Wisconsin's iron and steel industry was 114,556, in 1890 it was 155,963, and in 1900, 309,724 gross tons. Thus there was a much more rapid increase in tonnage in the last census decade. The industry reported a very marked concentration in the blast furnace business during the past census decade. The number of blast furnaces was reduced from 10 in 1890 to 6 in 1900. The principal products of the iron and steel mills are bar and rod iron and steel and steel rails. In 1890 the industry reported 9 establishments with a total product of $6,501,761, or 2.61 per cent of the total manufactured products of all industries. The average product per establishment was $722,418. In 1900 the number of establishments reported was 12 with a total product of 8,905,226, or 2.46 per cent of all industries. The average product per establishment was $742,102. Thus there was an increase of 3 establishments, and 37 per cent in the total product. The industry did not quite hold its rank in relative importance. There was a slight increase in the average output per establishment.

ARCHITECTURAL IRONWORK.

The delevopment of this industry in Wisconsin is partly an outgrowth of the iron and steel industry here, partly due to the growth of our cities and demand for fireproof structures and high business blocks, and in part established by the facilities for manufacture here and transportation to western markets. In 1890 we had 10 establishments reporting a gross product of $604,532, or an average of $60,453 each. In 1900 the number of establishments had grown to 12 and the product to $1,865,075, while the average capacity per establishment was about two and one-half times as great as in 1890.

LEATHER.

The tannery industry is one of the most important in Wisconsin. Tan bark, which constitutes an important and bulky material is used in this industry. It is practically necessary that the tannery be located as near as possible to the supply of bark and this is one important consideration which causes the industry to locate on a large scale in Wisconsin. Our transportation lines, moreover, reach all the important packing and slaughtering points in the west and northwest affording plenty of facilities for collecting supplies of raw hides. The number of hides taken in Wisconsin also affords a considerable quantity of raw materials for tanning purposes. In this industry Wisconsin showed the highest proportionate increase of any of the states in the past census decade, ranking fourth in 1890, and third in 1900. In 1900, Wisconsin produced the largest quantity of rough leather, the second largest quantity of sole leather, and also of calf and kid skins, and the largest value in harness leather. In 1890 the number of establishments in Wisconsin was 38, and the value of products $11,161,850, or 4.49 per cent of the total of manufactured products of all our industries. The average output per establishment amounted to $293,733. In 1900 the number of establishments was 42, and the total product was $20,074,373, or 5.56 per cent of all industries, while the average output per establishment was $477,975. Thus there was an average of nearly 80 per cent in the total product, and the average output per establishment considerably more than doubled, and the industry gained very much in relative importance.

LUMBER AND TIMBER PRODUCTS.

The importance of this industry has elsewhere been dealt with at some length so less need be said in this connection. During the past census decade Wisconsin has advanced to first position in lumbering, producing about 10 per cent of the total product of the United States. This position was achieved by Wisconsin partly through an increase in value of products, but principally through the failure of Michigan to keep up its output because of exhaustion of timber stands, though in the quantity of sawed timber Michigan still led in 1900. Wisconsin furnished more white pine timber than any other state, the cut of white pine being about two-thirds of our total output. Most of the counties of the state furnishing timber have seen their years of maximum cut. The industry, has, generally speaking, been constantly moving northward, and now the greatest activity is seen in the very northern tier of counties along Lake Superior and the Wisconsin-Michigan boundary line. The bulk of the industry is found in the upper Wisconsin River Valley, with important manufacturing, also, around the Wolf River and Lake Winnebago, the Green Bay [illegible] the Chippewa Valley and the Lake Superior shore. With the past exhaustive methods of exploitation it would seem that the industry must soon entirely consume its raw materials and come to an end in Wisconsin. Some efforts at reforestation may prove of worth in making the industry more permanent and be, therefore, valuable. But the desirability of unnatural restriction of the industry in order to prolong its existence is questionable from the public standpoint, whatever may be the concern of vested private interests. The industry has served and continues to serve a valuable purpose in the industrial development of the state. This it does best when going at its fullest capacity. At no time in the future can the establishment of manufacturing or the creation of new industrial centers be more needed or bring greater or more valuable returns than at present. The sooner these improvements are brought about the better for the community, and the more rapid will be the accumulation of our industrial wealth. We cannot eat our apple and have it. But when it seems that we are less likely to be hungry for the apple later than now, it is just as well to eat it, since it is finally to be eaten anyway. There would seem to be no occasion for the alarm commonly exhibited in public writings at the prospect of our loss of the lumber industry any more than an equal volume of other manufacturing. In the majority of instances, so far as our experience has gone in this respect, the lumber industry in passing leaves in its wake not an industrial void but a community of industries of more permanent and diversified and therefore more desirable character. Just when the end will come is idle to conjecture. Whether the owners of the timber stands will exploit them in the future as in the past or adopt some other policy is something which is known to them only, and which would go a great way in determining the longevity of the industry in Wisconsin. That the rate of cut must henceforth decrease, from year to year, seems accepted, yet no one is prepared to say how rapid the decrease is likely to prove. The length of time for which lumbering can continue, of course, depends very materially on this condition. With a view in part to placing a period to our lumbering industry several estimates of the timber stand in Wisconsin have been made. In 1880, Sargent estimated 41 billion feet of saw timber standing in Wisconsin, and in 1897 Roth estimated 17 billion. In the meantime over 50 billion feet had been cut. With the average annual cut in the neighborhood of 2 to 3 billion feet the supply ought to be nearly exhausted by this time. Yet it is not so nearly gone as might be reasoned from the figures presented as evidenced by the continuance of enormous lumbering enterprises throughout our northern counties. The irregularity and unevenness of the stand, together with the haphazard manner of earlier logging operations make the stand a very uncertain thing at best. Moreover, under the existing conditions it is well nigh impossible to estimate the possible growth in a given period or the loss by forest fires. Another thing which is adding a very considerable though indefinite and incalculable amount to the available saw timber in the woods is the constant downward tendency of the standards of the mills and deterioration of grades. As a consequence much lumber is cut and put on the market each year that a year or two previously would not have been considered in any lumberman's estimate of saw timber. The ownership of timber is passing more and more into the hands of a few large concerns. The smaller operators are cutting themselves out and either quitting the timber business entirely or emigrating. The establishments owning considerable tracts of timber are aiming generally to keep their mills running just as long as possible anticipating the prospects of a constantly growing scarcity of timber and increased demand on the part of the sash and door and millwork manufactories and consequent high prices. Nearly all these tendencies and many more are towards a conservation of the supply and the continuance of the lumbering industry in Wisconsin as an important industry for some years to come. Just, or even approximately, how long, no one is competent to say. In 1890 there were reported 853 establishments with a total gross product valued at $52,115,739, or 20.97 per cent of the total of all industries in the state, or more than the total of the three next largest industries combined. The average product per establishment was $61,097. In 1900 the number of establishments reported was 1,066, and the total product $57,634,816, or 15.97 per cent of all industries, or only about three per cent less than the total output of the three next greatest industries combined. The average output per establishment in 1900 was $54,066. Thus there was an increase of 26% in the number of establishments, and 10% in the total product with a decrease in the relative importance and in the average output of establishments.

LUMBER—PLANING MILL PRODUCTS.

The raw materials for this industry are furnished by the saw mill industry just above considered. To an important degree also the water power and transportation facilities of the state have been important factors in its growth. The manufacture of planed lumber, sash, doors and mill work has grown up in many places to afford profitable investments for the accumulated profits of lumbering under the direct care of the owner, the two industries being largely carried on together. This industry is one of the most important directly resulting from the lumber manufacturing in Wisconsin. In 1890, the number of establishments reported was 88, and the total product $6,295,810, or 2.53 per cent of all industries. The average product per establishment was $71,543. In 1900, there were reported 123 establishments with a total output of $8,400,695, or 2.33 per cent of all industries, the average product per establishment was $68,298.

MALT LIQUORS.

The growth of the brewing and malting industry in Wisconsin, in so far as it is traceable to rational economic causes, is due to market facilities and climatic and soil conditions conducive to grain raising. In 1890 there were reported 107 brewing establishments with a total product of $14,193,057, or 5.71 per cent of the total for all industries. In 1900 there were 147 establishments with a product of $19,394,709, or 5.37 per cent of all industries. There was a slight decreaese therefore in both relative importance and the average product per establishment. The malting industry is to a considerable extent carried on in connection with brewing. There were reported, however, in 1890, 15 separate establishments with a total product of $2,472,018, or a little less than 1 per cent of all industries. In 1900, the number of establishments was 17 with a product of $4,089,715, or 1.13 per cent of all industries. The average output per establishment increased from $164,801 in 1890 to $240,571 in 1900.

MARBLE AND STONEWORK.—MONUMENTS AND TOMBSTONES.

Among the natural deposits of industrial value in Wisconsin are found the best of granites, rhyolites, sandstones and limestones. The quarrying and dressing of these stones offer a profitable and valuable industry to the community. In 1890 there were reported 25 marble and stone-work establishments with a gross value of products of $467,422, and in 1900, 54 establishments with product of $754,456. The manufacturing of monuments and tombstones reported 56 establishments in 1890 and a total product of $752,905, and in 1900, 105 establishments with a total product of $1,169,897. Both of these industries, therefore, show very marked increases in the past decade exceeding the average for all industries in both cases. In this connection it is well to mention the manufacture of paving materials, chiefly stone blocks, which is a considerable industry in some of the granite producing parts of the state. Some of our granites being practically indestructible, are of a very high degree of excellence for this purpose. A notable example of these is the rhyolite, quarried in Berlin and vicinity, Green Lake county, which has the highest crushing test of any known rock.

PAPER AND WOOD PULP.

The paper and pulp industry is located in Wisconsin largely because of the water power and supply of suitable pulp wood and water for mixing pulp. The factor of market facilities has also been of great importance in its growth and prosperity. In 1900, Wisconsin ranked fifth among the states in this industry. In 1890 we produced a little less than 6 per cent of the total product of the country, while in 1900 the Wisconsin output amounted to 8.3 per cent. The leading kind of paper manufactured here is news print, being over one-third of the total. Wrapping paper is next important, being nearly one-fourth of the total. Book paper and fine writing papers amount together to about one-third of the total of all kinds. In respect to raw materials, Wisconsin is principally a wood using state. A partial list of the materials used by the paper and pulp industry of Wisconsin in the last census year is as follows:

Material Used.	Quantity, cords.	Value.
Domestic spruce	124,955	$748,939
Canadian spruce	24,754	164,481
Domestic poplar	1,367	12,388
Other pulp wood	59,978	210,243
Rags	29,049	717,409
Waste paper	7,725	165,777
Manila stock	3,339	58,892
Straw	6,307	21,107

Thus it appears that, of the woods, far the most important is the domestic spruce and that the bulk of the wood supply is of domestic origin, the "other pulp woods" being practically all domestic and probably nearly all cut in Wisconsin. The remaining material of greatest importance is rags. In 1890, the industry reported 27 establishments with a total gross output valued at $4,475,368, or 1.8 per cent of all industries. The average product per establishment amounted to $165,754.

PRINTING AND PUBLISHING, NEWSPAPERS, ETC.

The printing and publishing of newspapers and periodicals is one of those industries that come with increased population. The demand for newspapers is one that, to a certain extent, must be supplied locally, while educational and cultural advantages and encouragement in Wisconsin has given birth to some writing of a literary character. These two considerations are the principal ones explaining the growth in this industry. In addition it is well to remember that our distributing facilities particularly to the western public is of importance here also. In 1890 there were 379 establishments in this industry with a gross output of $3,256,897, or 1.31 per cent of all industries, and in 1900 there were 495 establishments with a total product of $4,103,415, or 1.14 per cent of the total for all industries.

SADDLERY AND HARNESS.

It will be remembered that Wisconsin produces more harness leather than any other state. This fact together with our market facilities and available labor should cause the location here of large harness manufacturing industries. That part of the industry, moreover, which is represented by the small shop engaged in getting out custom work and repairing in rural districts finds a constantly and rapidly growing market due to the rapid spread and development of our agricultural industries. In 1890, there were 332 establishments reported with a total product valued at $1,093,787, or .44 per cent of all manufactured products of the state. The average output per establishment amounted to $3,294. In 1900, there were 525 establishments with a total product of $1,906,632, or .53 per cent of all industries. The industry therefore shows an increase a little more rapid than the average for all industries, and in the increase the small shops maintained their relative importance.

SLAUGHTERING AND MEAT PACKING, WHOLESALE.

This industry has grown to a considerable importance in Wisconsin largely because of shipping facilities, suitable climatic conditions and the extensive stock raising industry of the state. With modern packing facilities and abundance of natural ice cheaply harvested, the shorter the distance stock must be shipped on foot to a good packing and distributing center the cheaper the meat can be placed on the market and the larger the margin of profit. In 1890, we had 22 wholesale slaughtering and meat packing establishments, the total output of which was valued at $10,346,398, or 4.17 per cent of our total products of manufactories. The average output per establishment was $470,290. In 1900, the number of establishments was only 11, while the product was $13,601,125, or 3.77 per cent of the total of all industries. The average output per establishment was $1,236,466, or nearly three times as great as in 1890. While the industry decreased in relative importance there was an absolute increase of over 30 per cent in the product. Probably the most striking tendency noticeable is the tremendous concentration which took place during the census decade.

SHEET METAL WORKING.

Coppersmithing, tinsmithing and sheet-iron working are conducted mostly on a small scale for custom trade and the importance of the small shops in this industry seems to have increased. The number of establishments in 1890 was 237 with a total product valued at $2,128,389, and in 1900 there were 497 establishments with a total output valued at $2,675,548. The average product per establishment decreased from $8,980 in 1890 to $5,383 in 1900.

TOBACCO.

There are two distinct branches of tobacco manufacturing in Wisconsin. One embraces the manufacture of smoking and chewing tobacco and snuff, and the other the making of cigars and cigarettes. The former is represented by a small nuuber of enterprises doing business on a large scale, due to and depending principally upon Wisconsin's tobacco crop, which is reported to yield a tobacco of a high quality and is constantly and rapidly increasing in importance. The manufacture of cigars, while much the more important branch of the industry as a whole, is represented largely by a great number of small establishments scattered throughout the state. So long as the general impression prevails that first class smokers can only be produced by hand rolling, the advantages of large scale production will continue to be less than in many other industries and a large proportion of it will continue to be represented by the small and scattered establishments supplying the bulk of the local trade. In 1890 the number of establishments engaged in the manufacture of chewing and smoking tobacco and snuff was 4, with a product valued at $1,212,668, or $303,167 each, and in 1900 there were 6 establishments with a total product of $1,632,354, or $272,059 each. There was a decrease in the average output and a slight loss of relative importance in this branch of the industry. In 1890, 355 cigar making establishments were reported with a total product valued at $2,524,949, or 1.05 per cent of all industries. The average product per establishment was $7,112. In 1900 there were 622 establishments with a total product of $3,255,676, or .90 per cent of all industries. The average product per establishment was nearly 30 per cent less than in 1890, being $5,234. The two branches of tobacco manufacture in 1900 constituted 1.35 per cent of all of tobacco manufacturing in 1900 constituted 1.35 per cent of all industries of the state.

TRUNKS AND VALISES.

The manufacture of trunks and valises is an important industry in the state and again illustrates the diversity and adaptability of Wisconsin's industrial conditions. Two important materials used in the manufacture of trunks and valises are produced in large quantities, namely, lumber and leather. Here is also a fine illustration of the value of the lumber industry in the industrial organization of Wisconsin, for it was when lumber was a far more important element in the manufacture of trunks than in the present day of trunks almost all iron, that the industry became established and took firm root in Wisconsin soil. It has since continued and improved on a large and substantial scale because Wisconsin furnished it an important part of its materials and excellent market facilities. In 1890, we had 13 establishments with a product of $1,193,812, or an average of $91,831 each, and in 1900, 16 establishments were reported with a total product of $1,560,006, or $97,500 each. The industry shows a substantial increase in the number of enterprises and almost kept pace with the high average growth of manufactures generally in the state, and shows a considerable increase in the average product per establishment.

WOODENWARE.

The woodenware industry of Wisconsin is due largely to our supply of hardwood timbers, available water power and shipping facilities. In 1890 we had 9 establishments with a total product of $144,951, or $16,109 each, while in 1900 there were only 3 establishments reported, but the product had increased to $1,226,671, or over $400,000 per establishment. Thus the industry has sprung into real improtance in a very short time, the rise being accompanied by a very striking concentration.

WOOLEN GOODS.

Woolen manufactories in Wisconsin became early established when, before the extensive development of dairying and more intensive agriculture, there was a very considerable sheep raising industry located in this state. The availability of excellent water power was also a factor in its location here. In 1890, there were reported 32 establishments with a total product valued at $1,669,944. In this year the product amounted to .67 per cent of all industries. In 1900 there were the same number of establishments reporting that the output had decreased to $1,435,368, or .40 per cent of all industries. The decrease in this industry is due principally to the necessity of importing raw wool from long distances for the purpose of manufacture.

The foregoing 44 industries represented 80 per cent of the total products of all the manufacturing in Wisconsin. The remaining 20 per cent is distributed among 110 industries none of which produce 1 per cent of the total product of all manufactories.

Of this number 15 are such that rational economic causes can be assigned for their location in Wisconsin. This list embraces cigar boxes, fancy and paper boxes, buttons, food preparations, fruit and vegetable canning, kaolin and other earth grinding, lime and cement, paving and paving materials, pickles and preserves, pottery, terra-cotta and fire-clay, refrigerators, wooden ship and boat building, sugar and molasses refining, vinegar and cider, and wood turning and carving. The principal factor in the location of these industries is that the raw material is either found, extracted, gathered or grown in Wisconsin. For most part the industrial industries in this list are not of great relative importance. A few show retrogression in the past census decade but the most of them are showing rapid development and contribute a very considerable volume to our manufacturing output.

Another group, and a very important one, embraces 13 industries. This group embraces those industrial pursuits of a quasi-personal service character represented by the several lines of custom and repairing work. The location or distribution of these industries is purely a question of population. In this list are bicycle repairing, boots and shoe custom work and repairing, rag carpet weaving, men's clothing, custom work and repairing, women's dressmaking, dyeing and cleaning, furniture repairing, upholstering and cabinet making, hairwork, lock and gun smithing, custom millinery, photography, sewing machine repairing, and watch, clock and jewelry repairing. The entire group represented about 2.5 per cent of all industries in 1900. Seven of these industries show increases in product while six reported decreases. The growing popularity, diversity and cheapness of factory made goods, particularly clothing, is largely responsible for this decrease. The value of women's clothing, for instance, made in dress-making establishments decreased from over $2,000,000 in 1890, to $567,843 in 1900, due primarily to this cause. This condition does not seem, however, to affect the custom millinery business which presents an increase from $964,073 in 1890, to $2,047,312 in 1900.

Another group of industries subject to about the same influence as the above group is represented by the building pursuits of which 7 were included in the census of manufactories. Of these carpentering has already been considered. The remaining six mechanical pursuits are brick and stone masonry, electrical construction and repairs, house and sign painting, paper hanging, plastering and stucco work, and plumbing, gas and steam fitting, with a single exception a very generally high rate of increase. The group as a whole represents about 2.38 per cent of all industries.

The bulk of the remaining industries are individually of small relative importance. In nature the majority are what has been termed neighborhood industries. They are the kind of industries, such as awnings, tents, bottling, brooms and brushes, coffee and spice milling, fur goods, glass cutting, lithographing and engraving, mineral and soda waters, patent medicines, and a miscellaneous list of others, which are likely to spring up in almost any industrial center where industrial conditions generally are favorable and a surrounding neighborhood offers a market for the product. The conditions of these industries appear, with a few exceptions, to be uniformly progressive and prosperous.

1890

Classification of Industries.	No. of establishments.	Value of products.	Per cent. of all manufactures.	Product per establishment.
Agricultural implements	51	$5,015,512	2.02	$98,343
Awnings, tents, sails	13	69,094	.03	5,315
Baking and yeast powders	3	295,482	.12	98,494
Baskets, rattan ware	8	87,915	.03	10,989
Blacksmithing and wheelwrighting	798	1,256,076	.50	1,574
Book binding and blank books	23	205,938	.08	8,954
Boot and shoe uppers	5	20,960	.01	4,192
Boots and shoes, custom and repair	508	694,605	.28	1,367
Boots and shoes, factory	32	2,972,233	1.19	92,882
Bottling	12	42,347	.02	3,529
Boxes, cigar	7	203,455	.08	29,065
Boxes, fancy and paper	7	132,100	.05	18,871
Boxes, wooden and packing	24	781,105	.31	32,542
Brass castings and finishings	5	370,451	.15	74,090
Bread and bakery products	256	2,064,288	.83	8,063
Brick and tile	137	1,642,465	.66	11,989

1890

Classification of Industries.	No. of establishments.	Value of products.	Per cent. of all manufactures.	Product per establishment.
Bridges	4	437,659	.18	109,415
Brooms and brushes	41	150,880	.06	3,680
Carpentering	367	5,798,939	2.33	15,801
Carpets, rag	30	40,196	.02	1,339
Carriage and wagon materials	13	96,739	.04	7,441
Carriages and sleds, children's	3	187,423	.07	62,474
Carriages and wagons	500	5,947,499	2.39	11,895
Cars and general R. R. shop construction	22	2,221,152	.89	100,961
Cheese and butter	966	6,960,711	2.81	7,206
Chemicals	6	184,807	.07	30,801
China decorating	3	112,863	.05	37,688
Clay and pottery products	16	142,977	.06	8,936
Clothing, house	4	183,690	.07	45,922
Clothing, men's custom repair	342	3,178,081	1.28	9,292
Clothing, men's factory prod.	27	3,909,726	1.57	144,804
Clothing, women's dressmaking	567	2,000,294	.80	3,528
Clothing, women's factory products	4	410,630	.16	102,658
Coffee and spice, milling	7	936,025	.38	133,718
Coffins and burial cases, trimming	14	66,254	.03	4,732
Coffins, burial cases and undertakers' supplies	4	99,494	.04	24,873
Confectionery	38	1,195,375	.48	31,457
Cooperage	140	1,527,008	.61	10,907
Cordage and twine	4	32,015	.01	8,004
Cotton goods	4	620,196	.25	155,049
Cutlery and edge tools	6	30,780	.01	5,130
Dentistry, mechanical	75	140,474	.06	1,873
Druggists' preparations	18	63,564	.03	3,531
Dyeing and cleaning	22	77,180	.03	3,508
Electrical apparatus and supplies	3	38,870	.01	12,955
Electroplating	4	6,800	.00	1,700
Fancy articles, N. O. S.	11	26,000	.01	2,363
Titles	3	54,082	.02	18,027
Flavoring extracts	4	73,850	.03	18,462
Flour and feed	497	24,252,297	9.76	48,797
Food preparations	8	159,898	.06	19,987
Foundry and machine shops	155	8,467,290	3.41	54,627
Fur goods	11	764,399	.30	69,491
Furnishing goods, men's	6	360,205	.15	60,034
Furniture, cabinet making and upholstering	95	599,209	.24	6,307
Furniture	11	662,501	.27	60,227
Furniture, factory product	35	2,954,016	1.19	84,400
Gas and lamp fixtures	3	37,800	.01	12,600
Gas, illuminating and heating	18	819,596	.33	45,533
Glass cutting and ornamenting	3	53,875	.02	17,958
Gloves and mittens	13	162,123	.07	12,471
Grease and tallow	9	66,986	.03	7,443
Hairwork	16	47,350	.02	2,959
Hand stamps	5	66,300	.03	13,260
Hardware	3	187,202	.07	62,401
Hats and caps, except wool	9	363,496	.15	40,388
Hay and straw baling	7	137,475	.05	19,639
Hosiery and knit goods	23	1,635,641	.66	71,115
Iron and steel	9	6,501,761	2.61	722,418
Iron and steel, nails and spikes	3	56,231	.02	18,743
Ironwork, agricultural	10	604,532	.24	60,453
Jewelry	4	94,500	.04	23,625
Leather, tanned and curried	38	11,161,850	4.49	293,733
Lime and cement	45	706,815	.28	15,707
Liquors, malt	107	14,193,057	5.71	132,645
Liquors, vinous	3	5,720	.00	1,907
Lithographing and engraving	4	409,866	.17	102,466
Lock and gun smithing	16	25,441	.01	1,590
Looking glass and picture frames	25	161,057	.07	6,442
Lumber and other mill products from logs	853	52,115,739	20.97	61,097
Lumber and planing mill, sash, etc.	88	6,295,810	2.53	71,543
Malt	15	2,472,018	.99	164,801
Marble and stonework	25	467,422	.19	18,697

1890

Classification of Industries.	No. of establishments.	Value of products.	Per cent. of all manufactures.	Product per establishment.
Masonry, brick and stone	144	3,682,473	1.48	25,570
Mattresses and spring beds	16	867,738	.35	54,234
Millinery, custom	204	864,073	.35	4,235
Mineral and soda waters	55	452,148	.18	8,221
Models and patterns	8	36,638	.01	4,579
Monuments and tombstones	56	752,905	.30	13,444
Musical instruments and materials	....	8,080	.00	1,616
Musical instruments, organs	3	24,600	.01	8,200
Oil, linseed	3	624,228	.25	208,076
Oil, lubricating	5	230,625	.09	46,125
Optical goods	3	9,750	.00	3,250
Painting and papering	210	1,310,972	.53	6,242
Paints	9	235,495	.10	26,166
Paper	19	4,216,593	1.70	221,926
Patent medicines	22	213,194	.08	9,696
Paving and paving materials	22	1,272,499	.51	57,841
Photography	89	346,928	.14	3,898
Photo-lithographing and engraving	3	21,315	.01	7,105
Pickles, preserves and sauces	10	188,734	.08	18,873
Plastering and stucco work	15	132,069	.05	8,804
Plumbing and gas fitting	67	1,471,786	.59	21,967
Printing and publishing, book, job and periodical	68	771,744	.31	11,349
Printing and publishing, newspaper and periodical	379	3,256,897	1.31	8,593
Pulp, wood	8	258,775	.10	32,347
Pumps except steam	31	178,228	.07	5,749
Refrigerators	3	109,845	.04	36,615
Roofing and roofing materials	25	260,911	.11	1,436
Rubber and elastic goods	3	157,400	.06	52,466
Saddlery and harness	332	1,093,787	.44	3,294
Sausage	6	311,513	.13	51,917
Shipbuilding	16	463,120	.19	28,945
Shirts	6	24,633	.01	4,105
Slaughtering and meat packing, wholesale	15	8,393,754	3.38	559,584
Slaughtering, wholesale (not packing)	7	1,952,644	.79	278,949
Soap and candles	17	647,904	.26	38,112
Soda water apparatus	3	155,850	.06	51,950
Stationery goods, N. O. S.	3	7,000	.00	2,333
Steam-fitting and heating apparatus	7	770,459	.31	110,065
Stencils and brands	3	5,863	.00	1,954
Sugar and molasses, refining	25	22,188	.01	887
Surgical appliances	5	36,300	.01	7,260
Timber products (not manufactured at mill)	266	8,850,705	3.56	33,273
Tinsmithing, copper and sheet iron work	237	2,128,389	.86	8,980
Tobacco, chewing, smoking and snuff	4	1,212,668	.49	303,167
Tobacco, cigars and cigarettes	355	2,524,949	1.05	7,112
Tools, not elsewhere specified	7	79,651	.03	11,379
Toys and games	3	167,660	.07	55,886
Trunks and valises	13	1,193,812	.48	91,831
Umbrellas and canes	4	22,027	.01	5,507
Vinegar and cider	11	323,661	.13	29,424
Washing machines and clothes wringers	4	3,675	.00	918
Watch, clock and jewelry repairing	87	220,931	.09	2,539
Windmills	7	586,452	.24	83,779
Wire work	9	170,450	.07	18,939
Wood turning and carving	13	161,130	.06	12,394
Woodenware, N. O. S.	9	144,951	.06	16,106
Woolen goods	32	1,669,944	.67	52,185
All other industries	93	3,367,724	1.35	36,212
Total	10,417	$248,546,164	100.00	$23,859

1900

Classification of Industries.	No. of establishments.	Value of products.	Per cent. of all manufactures.	Product per establishment.
Agricultural implements	51	$7,886,363	2.18	$154,634
Artificial feathers	3	10,146	.00	3,382
Artificial limbs	4	94,870	.02	23,717
Awnings, etc.	26	126,036	.03	4,848
Baking powders	4	30,285	.01	7,571
Baskets, rattan	9	91,695	.02	10,177
Bicycles, etc., repairing	179	392,761	.11	2,194
Bicycles and tricycles	23	2,795,236	.77	121,532
Blacking	3	49,7 6	.01	16.568
Blacksmithing	1,581	2,442,141	.67	1,546
Bookbinding, etc.	27	593,365	.16	21,976
Boot and shoe repairing	612	637,531	.17	1,041
Bottling	18	76,942	.02	4,274
Boxes, cigar	8	242,436	.06	30,304
Boxes, fancy, etc.	8	240,926	.06	30,116
Boxes, wooden	38	1,989,663	.55	52,359
Brass castings	10	888,755	24	88,875
Brass ware	3	612,950	.17	204,317
Bread and bakery products	430	3,619,288	1.00	8.417
Brick and tile	168	1,795,993	.50	10,630
Bridges	4	28,984	.01	7.246
Brooms and brushes	41	291,599	.08	7,112
Buttons	9	63,125	.02	7,014
Carpentering	665	7,115,245	1.97	10,700
Carpets, rag	51	51,427	.01	1,008
Carriage and wagon materials	10	193,982	.05	19,398
Carriages and sleds, children's	3	272,125	.08	90,708
Carriages and wagons	436	6,956,341	1.93	15,955
Cars and general shop con. R. R.	46	6,306,823	1.75	137,105
Charcoal	3	7,555	.00	2,158
Cheese, butter and condensed milk	2,018	20,120,147	5.57	9.970
Chemicals	4	254,196	.07	63,549
Clothing, horse	3	311,079	.09	103,693
Clothing, men's, custom repairing	661	3,310,047	.92	5,007
Clothing, men's, factory	89	4,393,092	1.21	49,361
Clothing, women's, dressmaking	224	567,843	.16	2,535
Clothing, women's factory	9	271,991	.07	30,221
Coffee and spice, milling	6	456,876	.13	76,146
Coffins, burial cases, etc.	3	172,251	.05	57,417
Confectionery	56	1,570,445	.43	28.0 4
Cooperage	126	1,683,180	.47	13,358
Cordage and twine	3	74,166	.02	24.722
Cotton goods	3	316,061	.09	105,354
Cutlery and edge tools	5	46,528	.01	9,305
Druggists' preparations	4	44,262	.01	11,065
Dyeing and cleaning	29	140,233	.04	4,835
Electrical apparatus	7	923,587	.25	131,941
Electrical construction and repairing	20	323.278	.09	16 164
Electroplating	8	23,377	.01	2,922
Enameling and enameled goods	4	1,954,345	.54	488,586
Engraving, steel, including plate printing	5	24,050	.01	4,810
Fancy articles	4	25,679	.01	6,419
Fish, canning, etc.	6	35,792	.01	5.965
Flavoring extracts	6	103,071	.03	17,178
Flour and feed mill	717	26,327,942	7.30	36 71[illegible]
Food preparations	15	1,332,588	.37	88,839
Foundry and machine shops	272	22,252,730	6.17	81,811
Fruits and vegetables, etc. canning	16	1,007,765	.28	62,985
Fur goods	33	913,754	.25	27 689
Furnishings, men's	3	19,500	.00	6,500
Furniture, cabinet making	142	539,328	.15	3.798
Furniture, factory products	78	8,721.823	2.42	111 818
Furs, dressed	8	56,959	.02	7.119
Gas, illuminating and heating	25	1,396,535	.38	55,861
Gas machines and meters	3	22.628	.01	7 542
Glass cutting, staining, etc.	6	112,787	.03	18,798
Gloves and mittens	19	507,495	.14	26.710
Grease and tallow	8	102,5[illegible]5	.03	12,813

1900

Classification of Industries.	No of e tab- lish- ments,	Value of products.	Per cent. of all manufac- tures.	Product per estab- lishment.
Hairwork	16	37,661	.01	2,354
Hammocks	3	311,319	.09	103,773
Hand knit goods	12	21,635	.01	1,803
Hand stamps	4	53,382	.01	13,345
Hardware	11	313,045	.09	28,459
Hardware, saddlery	4	248,365	.07	62,091
Hats and caps, except fur and wool	6	602,820	.16	100,470
Hosiery and knit goods	27	2,486,813	.69	92,104
House furnishings, N. O. S.	7	320,756	.09	45,822
Iron and steel	12	8,905,226	2 46	742,102
Iron and steel, nails and spikes	3	113,600	.03	37,866
Ironwork, agricultural	12	1,865,075	.52	155,423
Jewelry	5	76,372	.02	15,274
Kaolin and other earth grinding	4	42,064	.01	10,513
Leather goods	4	178,895	.05	44.724
Leather, tanned, curried and finished	42	20,074,373	5.56	477,975
Lime and cement	53	960,004	.26	18.113
Lithographing and engraving	7	715,862	.20	102,266
Liquors, distilled	5	2,698,984	.74	539,997
Liquors, malt	147	19,394,709	5.37	131,936
Lock and gun smithing	44	71,237	.02	1,619
Looking glass and picture frames	42	160,983	.04	3,833
Lumber and timber products	1,066	57,634,816	15.97	54,066
Lumber and planing mill products, sash, etc.	123	8,400,695	2.33	68,298
Malt	17	4,089,715	1.13	240,571
Marble and stone work	54	754,456	.21	13,971
Masonry, brick and stone	223	3,506,175	.97	15.722
Mattresses and spring beds	19	1,838,841	.51	96,781
Millinery and lace goods	6	529,185	.14	88,197
Millinery, custom	611	2,047,312	.57	3,351
Mineral and soda waters	132	1,151,747	.32	8,725
Models and patterns	7	144,583	.04	20,655
Monuments and tombstones	105	1,169,897	.32	11,141
Musical instruments and materials, N. O. S.	4	9,740	.00	2,435
Musical instruments, organs and materials	3	18,488	.00	6,162
Optical goods	3	31,065	.01	10,355
Painting, house and sign, etc.	379	1,791,013	.49	4,725
Paints	5	881,767	.24	176,353
Paper and wood pulp	47	10,895,576	3.02	231,821
Paper goods, N. O. S.	3	134,160	.04	44,720
Paper hanging	23	169,895	.04	7,386
Patent medicines and compounds	40	576.454	.16	14.411
Paving and paving materials	47	847,786	.23	18,038
Perfumery and cosmetics	3	64,935	.02	21,645
Photography	311	705,872	.19	2,269
Photo lithographing and photo engraving	4	50,724	.01	12,681
Pickles, preserves and sauces	15	316,657	.09	21,110
Plastering and stucco work	54	350,464	.09	6,490
Plumbers' supplies	5	156,219	.04	31,244
Plumbing, gas and steam fitting	248	2,797,258	.77	11,279
Pottery, terra cotta and fire-clay	4	14,213	.00	3,553
Printing and publishing, book and job	103	972,203	.27	9,439
Printing and publishing, newspaper and periodical	495	4,1[illegible]3,415	1.14	8,250
Pumps (except steam)	6	13,224	.00	2,204
Refrigerators	7	749,412	.21	107,059
Regalia and society banners, etc.	4	35,414	.01	8,853
Roofing and roofing materials	21	127,053	.04	6,050
Rubber and plaster goods	3	735,570	.24	245,190
Saddlery and harness	525	1,906,632	.53	3,631
Sausage	8	540,806	.15	67,601
Sewing machine repairs	9	11,817	.00	1,313
Ship and boat building, wooden	29	707,955	.19	24,412
Shirts	9	247,870	.07	27,541
Slaughtering and meat pack'g, wholesale	11	13,601,125	3.77	1,236,466

1900

Classification of Industries.	No. of establishments.	Value of products.	Per cent. of all manufactures.	Product per establishment.
Soap and candles	15	1,096,092	.30	73,073
Soda water apparatus	3	152,300	.04	50,766
Springs, steel car and carriage	5	340,823	.09	68,164
Starch	6	154,030	.04	25,671
Steam fitting and heating apparatus	8	1,124,731	.31	140,466
Sugar and molasses refining	18	15,450	.00	858
Surgical appliances	5	49,420	.01	9,884
Taxidermy	4	4,910	.00	1,227
Tinsmithing, coppersmithing and steel and iron working	497	2,675,548	.74	5,383
Tobacco, chewing, smoking and snuff	6	1,632,354	.45	272,059
Tobacco, cigars and cigarettes	622	3,255,676	.90	5,234
Tools, N. O. S.	8	107,172	.03	13,396
Trunks and valises	16	1,560,006	.43	97,500
Upholstering materials	11	301,895	.08	27,445
Vinegar and cider	5	163,330	.04	32,666
Watch, clock and jewelry repairing	366	529,606	.15	1,447
Windmills	9	444,787	.12	49,421
Wirework, including rope and cable	12	638,797	.18	53,233
Wood turning and carving	11	70,302	.02	6,391
Woodenware, N. O. S.	3	1,226,671	.34	408,890
Woolen goods	32	1,435,368	.40	44,855
All other industries	103	8,163,378	2.26	79,256
Total	16,187	$360,818,942	100.00	$22,289

WISCONSIN MANUFACTURING CENTERS OF OVER 20,000 POPULATION.

In order that we better appreciate the economic conditions which have contributed to the past upbuilding of our industrial centers and estimate the forces which are likely to prove helpful in our future industrial development, it is deemed most befitting to open up this part of our study with some ideas, in quotation or brief synopsis, applicable to Wisconsin conditions from an article originallly written by Mr. Edward A. Ross from Leland Stanford Junior University, and published in the Quarterly Journal of Economics for April, 1896. Much has been said elsewhere in books and papers on economics upon this subject but the above article is so succinct and full of substance as to be peculiarly adaptable for this purpose.

The article begins, "In the nature of things there must be causes that explain why an industrial enterprise—mill, factory, ıoundry, dairy, refinery—is located at just this or that place and not somewhere else. Some of these causes are non-rational, such as accident and caprice. Others are rational, but personal. The enterprise is started in order to boom the town, to give work to the unemployed, to utilize some plot or site otherwise unusable, to confer value on adjoining real estate or to give safe employment to capital under the watchful eye of the owner. The remaining causes are rational and economic; that is, the selected locality is deemed to offer certain advantages in production or marketing over any other equally available point." In considering the several industries which are important in the industrial centers of Wisconsin it is not possible or desirable to determine the "non-rational" or "personal" forces which contributed to their growth. Since we are to consider each industry as a unit—a group of enterprises—to a considerable extent "the non-rational and personal causes are eliminated."

The rational economic causes as enumerated by Mr. Ross are as follows: First, the location of natural deposits determines the location of our extractive industries such as mining, quarrying, lumbering, etc., and also to a degree the location of industries engaged in refining or otherwise manufacturing or preparing the product of purely elaborative industries. Thus much of our lumber is sawed near the seat of logging operations as near as practicable because of the greater facility of handling and hauling sawed lumber especially where logs cannot be carried to the mill by water. The manufacture of lime stone into lime near the place where the stone is quarried is the almost universal practice.

Soil, climate and situation are decisive in the location of agricultural and allied industries. While we are interested here in manufacturing rather than agricultural or other industries, this consideration is nevertheless important in so much as agriculture in Wisconsin has an important bearing and influence upon our manufacturing industries. An illustration of this fact and of the principle cited above of place association between extractive and elaborative industries is found in the location of flour and grist mills and breweries in the grain and corn raising sections and starch factories in sandy sections raising chiefly potatoes and tobacco factories in the tobacco sections and beet sugar and canning factories in the neighborhood of the farms on which the raw materials are grown.

Climate is also of importance in locating some manufactories because of the nature of the materials and processes involved. Climatic conditions play an important part in our tobacco handling and manufacture in Wisconsin. The meat packing, dairying and brewing industries are favored here by our cold winters producing a cheap supply of natural ice. Metallic industries find the low average temperature of Wisconsin inviting.

Besides the location of the natural deposits of materials which go into the finished product, the location of raw materials is of great importance. Particularly is this consideration of great force when "the materials are bulky and heavy relatively to their value," or "when the finished product embodies but a small part of the materials employed" or when transportation in the raw state is attended by exceptional cost and difficulty. This principle applies in the melting of iron ore at Ashland

and Superior near the iron mines of the Superior region. The agricultural implement, wagon, and furniture manufactories are influenced in locating in Wisconsin by availability of hardwood lumber sawed at Wisconsin mills, while sash and door planing mills follow the pine saw-mills as well.

Another important cause of the location of industries is the supply of auxiliary materials, which, while in many cases they do not enter as a part of the different product, are necessary to the process of manufacture and may exceed in bulk or other difficulties of transportation the raw materials which actually go into the finished product. Thus a supply of tan bark is a necessity to the tanning industry and in Wisconsin is probably the most potent force in the location here of this important branch of our manufactures. Fluxing materials and coal are important to the iron melting industry and the availability of moulding sand is a force in locating foundries.

Often a decisive consideration is the availability of power supply. Since steam power is practically available almost anywhere this point has application primarily to water power. Especially is this consideration of weight in the location of those of our industries employing heavy machinery requiring very great power supply. Illustrations in Wisconsin are found in the saw mills, flour and grist mills, planing mills, and sash and door factories, etc. The importance of water power has tended to concentrate manufacturing in several industries in small areas about the source of power, thus building up industrial centers. The development of economical electrical transmission of this power will tend to counteract this force. In Wisconsin it will also make available a great deal more power, the value of which is now diminished by considerations of place.

The availability of a supply of cheap labor is the important consideration in determining the location of many industries. This applies to industries which offer employment for those persons in the community, generally women and children, who, because of the nature of the work to be done or other cause, do not find employment in those industries which for natural and economic considerations are located in the place. This principle of the parasitic industries has already been explained in connection with the industries themselves and the most notable examples pointed out.

Many industries are located primarily with reference to the residence of the consumer. The industries engaged in custom manufacture, repairing and cleaning of clothing, as already pointed out, are of this class. Besides this, many other industries having more or less of a quasi-personal service character such as photography, local newspapers, etc., are subject to this principle.

Since the price of labor varies with localities, the availability of cheap labor is often a force in locating some industries. The parasitic industries as examples of this class have already been discussed. The other industries most free to seek out favorable locations with regard to labor are those which complete the finishing process in the manufacture and put the product in shape for its final use. Labor cost determines the location of such manufactures as "clothing, linen, underwear, gloves, boots and shoes, millinery, cigars, patent medicines and cutlery."

Low cost of living tends to cheap labor, and high cost of living precludes it. "Living will be cheap in small places, supplied from surrounding country." And we, therefore, find these industries located in small agricultural centers if distributing facilities are not too backward. The cost of living is also low in "large cities that, on account of superior transportation facilities, are able to draw their supplies from a wide area. Apart, therefore, from the cost of moving materials or products, industries will tend to congregate in commercial centers."

Legal restrictions and regulations on the part of the state or a tendency to strikes and disorder on the part of the workmen in any locality or section tend to repel manufactures in general. On the other hand, special deference to the protection, welfare and interests of the capitalists tend to induce them to invest their money in a given place. Where aid is given, not temporarily in order to root an industry in a naturally favorable location, but permanently in order to keep it where it is unsuited, the industry becomes a parasite, sapping the profits out of the unfavored industries.

A few industries develop to greater importance in a locality because of inventive talent or technical skill. These forces have contributed much to the pre-eminence of Wisconsin in some lines of manufacture of machinery and agricultural implements.

The foregoing enumeration of the forces of location covers fairly well the rational economic causes which give rise to manufacturing centers and manufacturing generally in Wisconsin. With the other industrial phenomenon which Mr. Ross discusses in the same article, namely, the concentration or localization of a given industry in one place, we have less to do. Strictly speaking there is no instance of any important industry localized in any one place in Wisconsin. This is a development that belongs to older and more intense industrial conditions than here prevail. In some cases we find something that on first sight looks like the specialization of localities or places, in a given industry. But in nearly, if not quite, all such cases on closer examination shows that the given industry predominates either because it is located in an agricultural center and so fully utilizes the available labor supply as to preclude the establishment of considerable enterprises in other lines, or because manufacturing in the given place is new and has not yet had time to develop a diversity of industries, and not because the place is adaptable to only the one industry to the exclusion of all others. The localization of any industry in any one place or the specialization of any one place in a single industry are not common enough in Wisconsin to require a great deal of attention. On the other hand, a tendency towards localization may be noted in the growing pre-eminence along some lines of manufacture in a number of places in Wisconsin. This tendency no doubt plays a considerable part in the upbuilding of our manufacturing centers. There will be opportunity to note instances of this in the remaining parts of this study.

Some of the forces of concentration or localization play an active part in this tendency towards localization in Wisconsin.

Some of these forces, as named by Mr. Ross, are as follows: "A large number of workpeople living in a single community can improve faster in skill than if scattered in small separate groups. Methods are rapidly leveled up to the best known, so that it is easier for a new process or type of skill to become a standard. The prompter appreciation of and adoption of an improvement stimulates latent inventive talent. Inventions make it possible to maintain special trade schools, museums and laboratories, for promoting efficiency. Moreover, when the aggregate output is large, certain specializations appear between the establishments, and the most expensive machinery can be used. * * * In connection with the center there grows up an organization for exchange, able to develop a market for raw material and for product that may economize the use of middlemen."

In addition to all these, there are advantages which accrue to an entire industry at a given place because the success of the earlier enterprise becomes known. A city becomes advertised, so to speak, for its product in some particular line of manufacture. Especially is this important in these days of extensive and scientific advertising. The fame of a town for some product is an advertising advantage which causes many enterprises in the same line to flock thither. Probably the most notable illustration of this is the colony of cereal manufacturing enterprises which in a few years has gathered in and about the city of Battle Creek, Michigan. In Milwaukee there are nine brewing establishments all enjoying considerable advantages over manufacturers in outlying towns because they make "Milwaukee beer," that product having been made famous by the extensive operation and advertising of two or three of the larger establishments.

All these forces are at work upon our industrial development. But those of localization and specialization have as yet to bring forth their important results. The chief reasons for this are found in the admirable adaptability of Wisconsin soil for varied and diversified manufactures and the newness of our industrial organization. In upbuilding of industrial centers in this state, the forces which we will have to hold most potent are the purely economic advantages of location as previously enumerated. In most cases these advantages are common to several industries giving rise to a diversity which adds security to the industrial future.

LA CROSSE.

The city of La Crosse is situated on the Mississippi River a few miles below where the Black River empties into it. It is surrounded by a wide area of fertile agricultural territory with scattered growths of hardwood timber. It was among the early settlements in Wisconsin. In transportation facilities it has the advantage of the navigable waters of the Mississippi River system. It also has three railroads connecting by most direct routes with all commercial and industrial centers of the Northwest and radiating throughout the rich agricultural sections of the west and Northwest. The lumbering industry early attained importance at this point and fostered here the development of a manufacturing center, remaining even in 1900 the leading manufacturing industry. The logs were cut about the upper Mississippi tributaries particularly the Black River and brought down to La Crosse in "drives" or towed to the mills in "booms." While lumbering continued the leading manufacturing industry, there had been a constantly increasing diversification and rapidly growing manufacturing outside of the lumbering industry. This fortunate development stood the city well in hand when, owing to the failure of timber supply, the lumber industry began its rapid decline. In 1890 the output of manufactures was valued at $9,157,501, and in 1900 had decreased to $8,281,749, or 9.6 per cent. More than twice the amount of this decrease was the falling off in the lumbering industry alone. So that for the manufacturing of the city exclusive of lumber and timber products, there was really an increase of over 13 per cent. This increase is partly represented in new industries and by a very marked increase of new establishments—from 200 in 1890 to 255 in 1900, or 27.5 per cent. Two of the new industries assumed considerable importance during the decade. Agricultural implements and furniture, factory product, which were not reported in 1890, reported in 1900, a gross output of $368,012, and $119,641, or 4.6 per cent, and 1.3 per cent respectively of the totals for each of those industries for the entire state.

In 1900 there were 13 industries in the city of La Crosse reporting an output of over $100,000. With the exception of the two largest, lumbering and flour and grist milling, all reported increases ranging from 2 per cent up. Two of these industries, as already pointed out, were established during the decade. One industry, confectionery, shows an increase in product from $50,608 to $308,802, or 512 per cent. The next highest increase is 76 per cent reported for foundry and machine shop products. In 1900 the industry reported a total gross output valued at $192,150. The brewing industry at La Crosse is the only industry with a product of over $1,000,000, showing an increase. In this case, however, the increase is very high, offsetting much of the loss in the milling industry. In 1890 the industry reported $651,137, and in 1900, $1,133,090, or an increase of 74 per cent. The next highest increase is 70 per cent reported for printing and publishing of newspapers and periodicals. Bread and other bakery products show an increase of 53 per cent. Plumbing, gas and steam fitting shows an increase of 35 per cent. Tobacco, cigars and cigarettes increased 22 per cent. Lumber, planing mill products increased 20 per cent, and carriages and wagons 2 per cent. The industries with a product of less than $100,000 in 1900 reported a total output of $1,855,918 in 1890, and $2,282,013, in 1900 showing collectively an increase of 23 per cent. The milling and lumber industries reported decreases in products of 42 per cent, and 56 per cent respectively.

The greatest degree of localization at La Crosse is the confectionery industry, 19.6 per cent of the product of the state coming from that city. Of malt liquors, La Crosse supplies 5.8 per cent of the state's product, and 5.9 per cent of the cigars and cigarettes. Of our flour and grist mill products, 4.5 per cent is manufactured at La Crosse, and of the planing mill products, 4.3 per cent.

MILWAUKEE.

The manufacturing of the city of Milwaukee shows substantial growth during the past census decade. That city's favored location with reference to commerce and manufactures is too well known to require any attention here. The distributing facilities in all directions from this center are unexcelled. A rich agricultural state gives it a substantial source of supplies and renders a large population and low cost of living possible. The raw materials of the most important of its manufacturing industries are produced largely within the state or in territory adjacent to the Great Lakes and are therefore readily available.

In the past census decade there have been many new industries added to Milwaukee's already very diversified manufactures. Seven of these industries reported, for the first time, in 1900, each showing products in excess of $100,000, and therefore appear as specified industries in table V following. Of these, one industry, namely iron and steel, reports an output of $7,410,213, and two others have products of $1,223,549, and $1,708,171, respectively.

Besides important gains in new lines of manufacturing the table shows substantial increases in nearly all of the older industries. Manufactures as a whole in Milwaukee reported a total gross product in 1890, of $97,503,951, and in 1900, of $130,852,088, or an increase of 34.2 per cent. It will be remembered that the increase in products of Milwaukee county for the census decade was 45 per cent, thus showing a more rapid growth for the suburban manufactories and showing the recent tendency in manufacturing to spread to the outskirts and suburbs of the largest cities rather than add to the congestion of their crowded manufacturing districts. The manufacturing of Milwaukee county exclusive of the city of Milwaukee,—presumably the corporate limits—was $1,094,500 in 1890. By 1900, it amounted to $9,400,295, an amount exceeded by the manufactured product of Racine, Winnebago, La Crosse and Sheboygan counties only. Since from an industrial point of view much of this suburban manufacturing properly belongs to industrial Milwaukee and is indebted and amendable to the same economic causes and conditions, the importance of this growth is properly pointed out in this connection.

In 1900, there were in Milwaukee 71 industries each reporting a total output in excess of $100,000. Of this number, as already noted, seven were reported for the first time in 1900. Five more of these industries more than thribbled in output, and five more than doubled. Four showed increases between 75 per cent and 100 per cent, six between 50 per cent and 75 per cent, ten between 25 per cent and 50 per cent, 14 less than 25 per cent. While 20 industries reported decreases in product. Five of these 20 industries reporting decreased output in 1900 are repairing and custom working industries in which the highest decrease is 80 per cent for dressmaking, the decrease not exceeding 23 per cent in any of the other four cases. Of the decrease industries, seven report products in excess of $1,000,000 each. For these important industries, however, the rate of decrease is lo[illegible] ing less than 10 per cent in all but two instances. In a general way this rule seems to hold good for all the decrease industries. The decrease is, generally, high only for some industries of less importance, though there are a few very desirable industries showing a loss of 50 per cent or over. They include brick and tile, cars and general shop construction by railroad companies, carriages and wagons and paving materials. In many instances this loss reappears as a gain in the returns for Milwaukee county exclusive of the city because of the recent tendency already cited to seek the outskirts of the city rather than the center. Properly, therefore, the loss is to some extent merely apparent, being due to a movement which has not removed the industries beyond the sphere of Milwaukee's industrial conditions and advantages.

The largest product of a single industry is $14,495,362 reported for foundries and machine shops, an amount equalled by the total manufacturing of only one county in the state outside of Milwaukee county. In the census period the rate of increase for this industry was 163 per cent. In 1900 Milwaukee produced 65.1 per cent of the total foundry and machine shop products of the state.

Next in rank of output, and only a little behind, is the brewing industry of Milwaukee. In 1890 this industry reported an output of $10,810,695, and in 1900, $13,899,390, or an increase of 28 per cent. In 1900 Milwaukee produced 71.6 per cent of the malt liquor product of the state.

The slaughtering and meat packing industry of Milwaukee, including Cudahy, comes next in value of products with a product in 1900, valued at $13,045,979. The rate of increase for the census decade was 34 per cent. The product of Milwaukee and Cudahy in 1900 represented 94.2 per cent of this industry for the entire state. It should, however, be remembered, in ranking this industry on the product basis, that the tendency is to give it undue importance.

The tannery industry, on almost any basis other than gross output, would rank ahead of the packing industry. In 1890, the tanning industry of Milwaukee reported a total product of $8,429,814, and in 1900 the output was $10,267,835, the increase being 22 per cent. In this industry Milwaukee represents 5.1 per cent of the entire state.

In point of product, the next great industry of Milwaukee, reported for the first time in 1900, is iron and steel, with a total product of $7,410,213 representing 83 per cent of this industry for the whole state.

Flour and grist milling shows the next largest output. In 1890 the value of flour and grist milled in Milwaukee was $4,438,983. In 1900 the output was valued at $6,357,983. The increase was therefore 43 per cent and the output of Milwaukee 24.1 per cent of the state's product in this industry. This is another industry which, on product basis, ranks high because of the large proportion of the product which is represented by cost of raw materials.

The foregoing six industries comprise a group of leading industries for Milwaukee, there being a very considerable drop from the value of products in the last-named industry to the value of products in the next largest—a drop of nearly one-half. In the aggregate these six industries show an output in 1900 of $65,476,762, or over 50 per cent of the total manufactures of the city of Milwaukee.

The industries with an annual output of between 3 and 4 million dollars are men's clothing, factory product and carpentering, the products for 1900 being $3,593,736, and $3,324,734 each respectively. While the former shows a slight increase for the census period, the latter shows a decrease in products of 7 per cent. The factory manufacture of men's clothing in Milwaukee is 81.8 per cent of the total of the state, and the carpentering industry shows 46.7 per cent of the state's product at Milwaukee.

The industries with outputs between 2 and 3 million dollars are agricultural implements; boots and shoes, factory product; bread and other bakery products; lumber, planing mill products; and malt. Agricultural implements manufacture shows an increase of 208 per cent with 29 per cent of the Wisconsin industry at Milwaukee. The boot and shoe industry shows an increase of 35 per cent, and Milwaukee furnishes 45.8 per cent of the state's output. Bread and bakery products have increased 36 per cent, and Milwaukee produced 59.6 per cent of the total product of the state.

The planing mill industry begins to show effects of falling off in the lumber supply. The industry shows a decrease in output of 9 per cent. The proportion of the planing mill industry of the state located at Milwaukee is 25.6 per cent. The malting industry is properly an adjunct of brewing and much of it is conducted as a part of that industry. That part of the malting industry of Milwaukee reported as such shows an increase of 7 per cent and represents 56.6 per cent of the malting industry of the state.

The 14 industries in Milwaukee reporting products between 1 and 2 million dollars in 1900 are: bicycles and tricycles; men's clothing; custom work and repairing; confectionery; enameling and enameled goods; furniture, factory product; hosiery and knit goods; architectural iron work; masonry; plumbing; gas and steam fitting; printing and publishing newspapers and periodicals; steam fittings and heating apparatus; sheet metal work; tobacco, chewing, smoking and snuff, and tobacco, cigars and cigarettes. Bicycle and enameling and enameled goods are two of those industries reported in 1900 for the first time and the product of Milwaukee is 43.7 per cent and 87.4 per cent respectively of the total for these industries in the state. The highest increase for the rest of this group is 81 per cent shown for architectural ironwork, the Milwaukee product being 58.5 per cent of the state's total. The manufacture of steam fittings and heating apparatus shows an increase of 48 per cent representing the entire industry in this state. Chewing and smoking tobacco and snuff shows an increase of 34 per cent and embraces 99.4 per cent of this industry in Wisconsin. Plumbing, gas and steam fitting shows an increase of 43 per cent, and the proportion of the state's product in Milwaukee is 47.6 per cent. The confectionery industry shows an increase of 37 per cent, and Milwaukee reports 66.2 per cent of the state's total output. Newspaper and periodical printing and publishing shows an increase of 17 per cent representing 40.9 per cent of this industry in the state. Hosiery and knit goods shows an increase of 9 per cent and the product of Milwaukee at 49.2 per cent of the total Wisconsin product in this industry. The remaining five industries in this group show decreases ranging from a fraction of 1 per cent to 38 per cent, the intermediate decreases being 1, 6 and 13 per cent respectively. The relative importance of the Milwaukee product in each of these industries is 41.9, 17.1, 38.9, 54.1 and 33.5 per cent of the state's output in men's custom clothing; furniture, factory product; masonery; sheet metal; and cigars and cigarettes respectively. So that these decreases, though small, affect a considerable portion, in each case, of the entire industry in Wisconsin.

Among the industries reporting products less than $1,000,000 in 1900, there are some very notable increases. Book binding and blankbook making reported a product of $160,588 in 1890, and $524,961 in 1900, or an increase for 1900 of 211 per cent. Milwaukee's proportion of this industry in the state was 88.4 per cent in 1900. Brass castings and finishings shows a growth from $370,451 in 1890 to $884,050 in

1900, or 138 per cent and the proportion in Milwaukee was 99.5 per cent. The manufacture of chemicals increased from $112,157 in 1890 to $254,196 in 1900, or 126 per cent, the entire industry in Wisconsin being located in Milwaukee. The manufacture of electrical apparatus and supplies reported $38,870 in 1890 and $502,332 in 1900, thus showing an increase of 1140 per cent with 54.4 per cent of the Wisconsin product coming from Milwaukee. The increase in food preparations from $35,450 in 1890 to $203,909 in 1900 was 475 per cent. Milwaukee's proportion being 15.3 per cent of the entire industry in this state. The manufacture of gloves and mittens grew from $108,819 in 1890 to $252,182 in 1900, or 131 per cent, representing 49.6 per cent of that industry in Wisconsin. The manufacture of hats and caps, except fur and wool, at Milwaukee embraces the entire industry in Wisconsin and increased in output from $363,496 in 1890 to $602,820 in 1900, or 66 per cent. The manufacture of millinery and lace goods is reported for the first time in 1900, and 99 per cent of this industry in Wisconsin is located at Milwaukee. The output in 1900 was $524,185. The plastering and stucco work industry at Milwaukee shows an increase from $90,400 in 1890 to $317,268 in 1900, or 250 per cent. Book and job printing reported products valued at $750,896 in 1900, and shows an increase for the census period of 9 per cent. The proportion of the state's product reported from Milwaukee in 1900 was 77.2 per cent. Saddlery and harness manufacture also shows a large increase. In 1890 the output at Milwaukee was $275,702, and in 1900, $548,841, thus showing an increase of 99 per cent and 28.7 per cent of the total of these products for the state. Sausage making reported products valued at $311,513 in 1890 and $532,806 in 1900, or an increase of 71 per cent for the census period. The proportion of this industry in Milwaukee in 1900 was 98.5 per cent of the total for the state. The manufacture of soap and candles at Milwaukee also shows a high rate of increase in the census period. In 1890 the product reported was $510,966, while in 1900 it had increased to $967,767, or 89 per cent, and represented 88.2 per cent of the soap and candle industry in the state. The trunk and valise industry at Milwaukee reported a product of $614,054 in 1890, and $969,022 in 1900, thus showing an increase of 5.7 per cent, and in 1900 producing 62.1 per cent of the output of trunks and valises manufactured in this state.

The remaining 30 industries in Milwaukee reporting over $100,000 and less than $1,000,000 of products in 1900 are of less relative importance. This group embraces 13 of the 20 industries reporting decreases. With the exception of 3 or 4 of these industries reporting decreases in output only a few of the 30 produced over 200,000 in 1890. With very few exceptions the proportion of each of these industries located in Milwaukee is not a large part of the total of the respective industries in Wisconsin.

OSHKOSH.

The city of Oshkosh, like the city of La Crosse, is situated near the mouth of an important lumbering stream. The Wolf river became early one of the most important of Wisconsin logging ways. The bulk of the timber stand of an extensive and heavily wooded area was brought to Oshkosh and gave rise to the important lumbering industry which was the beginning of a manufacturing center.

In 1890 the total products of manufactories at Oshkosh was $8,620,626 and in 1900, $9,781,248. The rate of increase was 1.9 per cent, and the total product in 1900, 2.5 per cent of the manufactures of the state. While there was only a slight increase in manufactures as a whole there was considerable improvement in the general industrial condition and growth in newer lines of industry. The manufacturing of the city more than maintained its output in the face of a loss of 37 per cent in its principal industry which, in 1890, constituted about 45 per cent of its manufactures.

The industries reporting output exceeding $100,000 in 1900 were carpentering; carriages and wagons; flour and grist milling; foundry and machine shop products; furniture, factory product; lumber and timber products; lumber, planing mill products; cigars and cigarettes. Of these by far the most important was the sawmill industry. In 1890 this industry reported manufactured products to the value of $3,904,550 and in 1900 to the value of $244,430. Owing to the failure of timber supply the industry suffered a loss during the census period of 37 per cent, and in 1900 only 4.3 per cent of the state's lumber product was sawed at Oshkosh.

Next in importance and separately reported for the first time in 1900 is the planing mill industry. The output of the planing mills and sash and door factories of Oshkosh was reported as $1,619,836, and represented 19.2 per cent of all this industry in the state.

Carpentering and flour and grist milling show decreases of 49 and 56 per cent respectively.

Carriage and wagon manufacturing at Oshkosh shows an increase from $394,512 in 1890, to $547,936 in 1900, or 39 per cent, and represents 7.8 per cent of that industry in Wisconsin,

Foundry and machine shop product shows a considerable gain. In 1890 the output was valued at $223,825, and in 1900 at $294,963, thus showing an increase of 31 per cent.

The furniture factories of Oshkosh also show a rapid growth in imoprtance, reporting products to the value of $552,525, in 1890, and $720,826 in 1900. The increase amounts to 30 per cent and the output, in 1900, to 8.2 per cent of the furniture manufactured in Wisconsin.

Cigar and cigarette making is the remaining industry at Oshkosh reporting a product of $100,000, in 1900. This industry little more than kept up its output of 1890, and produced 35 per cent of the cigars and cigarettes manufactured in Wisconsin..

RACINE.

The city of Racine located on the shore of Lake Michigan within a few miles of Milwaukee and Chicago, having direct railroad connection with both points and with a line of railway extending into the rich agricultural west, is a rapidly growing manufacturing center. In 1890 the total products of its manufactures was $8,462,359. By 1900 it had increased to $12,502,796, or an increase of 47.7 per cent. In 1900 the product of Racine manufactures was 3.4 per cent of the state's output. Among its most important industries are found many which have grown up during the census period. Not only has the manufacturing of the city grown in volume, but in general solidity and diversity as well.

The leading industry at Racine is the manufacture of agricultural implements. In 1890 the product was reported at $1,979,613, and in 1900 at $3,001,009, thus showing an increase of 51 per cent, and in 1900 representing 38 per cent of the agricultural implement industry of Wisconsin.

The second largest industry at Racine in 1900 was the manufacture of carriages and wagons. In 1890 this industry reported products valued at $1,902,536. In 1900 the output had increased to $2,749,653, or an increase of 44 per cent. At the last census, therefore, Racine had 39.5 per cent of this industry in Wisconsin.

An industry very rapidly growing in importance at Racine is that of the foundry and machine shop. In 1890 the output was valued at $307,701 and in 1900 at $849,455, showing an increase of 176 per cent. The proportion of this industry in Wisconsin located at Racine was 3.8 per cent.

The next important industry at Racine is boot and shoe manufacturing. This is one of the industries reported for the first time in 1900 when the product was $849,215 and represented 17.7 per cent of this whole industry in Wisconsin.

The tannery industry holds a very important place in Racine manufactures although showing decrease in output during the census period. In 1890 the tannery product at Racine was $706,000, and in 1900, $576,236, thus showing a decrease of 18 per cent. In 1900, 2.8 per cent of the state's product in this industry came from Racine.

The manufacture of trunks and valises at Racine is an old and long established industry. The output at the two censuses was practically the same, about $372,000, and in 1900 was 23.9 per cent of the state's total product in this industry.

The manufacture of saddlery, hardware and steel car and carriage springs are two new industries in Wisconsin, both being reported for the first time in 1900, and both being located wholly at Racine. The product in saddlery hardware was $284,365, and in steel car and carriage springs, $340,823.

The planing mill industry also is reported from Racine for the first time in 1900. The gross product was $123,957, or 1.4 per cent of that industry in Wisconsin.

The remaining industry at Racine reporting products to the amount of $100,000 in 1900, was newspaper and periodical publishing and printing. In 1890 the product was $113,341, and in 1900, $120,418. The increase was 6 per cent, and the proportion to the industry for the whole state was 2.9 per cent.

The smaller manufactories of Racine, including besides the smallest industries not separately reported, about 20 specified industries in 1900 as a whole report good progress. The product of the cities' manufactures in 1890 outside of the ten industries considered above was $3,081,861, and in 1900, $5,935,706. Thus the minor industries together show an increase of over 90 per cent, or much higher than the average for the cities manufacturing as a whole.

SHEBOYGAN.

The city of Sheboygan had not until the last census, attained a population of 20,000 and its manufactures were never before reported separately. While no mathematical comparisons are therefore possible it is known in a general way that the manufacturing of this city has in the past census period experienced a very rapid growth. Especially is this true of the furniture manufacturing which is the principal industry. This city is on the lake shore and nearer than Milwaukee to the hardwood mills and connected with them by direct rail routes and water transportation. When given the same distributing facilities as Milwaukee in the western and southern markets its advantages as a manufacturing center are reinforced.

As already noted the leading industry at Sheboygan is the manufacture of furniture. The output in 1900 amounted to

$3,189,045, and was 36.7 per cent of the total output of the state. It is not unlikely that there is some relation between the rapid growth of this industry at Sheboygan and the slight falling off in the output at Milwaukee.

Sheboygan reported in 1900 one other industry with a product of over $100,000, namely, carpentering. This industry reported a product of $171,025, and was 2.4 per cent of the total for the state.

Foundry and machine shop products come very near the $100,000 mark with a product of $99,278, or 4 per cent of this industry in the state.

SUPERIOR.

Like Sheboygan, Superior is first reported separately by the census of 1900. In this year the manufactures of Superior were valued at $7,527,703, and constituted 2.8 per cent of the manufactures of the state. Superior presents more developed and diversified manufacturing than Sheboygan. In 1900 Superior showed five industries with products exceeding $100,000 in value.

A rapidly growing industry and the most important in 1900 at Superior is the saw mill industry. The product reported was $559,781 and constituted 9 per cent of this industry for the entire state.

Foundry and machine shop products rank next with an output of $218,296, or .9 per cent of the total of this industry in Wisconsin.

Malt liquor reported a product valued at $112,840, and represented .6 per cent of the total for the state.

Plumbing, gas and steam fitting had products valued at $160,925, or 5.7 per cent of the state's total production.

Printing and publishing of newspapers and periodicals is the remaining industry with a product of over $100,000. The output reported in 1900 in this industry was $153,454. This constituted 3.7 per cent of the newspaper and periodical business in Wisconsin.

LA CROSSE.

Industries.	Value of Products.		Per cent. of increase.	Per cent of total for state.
	1890.	1900.		
Agricultural implements	....	$368,012	....	4.6
Bread and bakery products	$82,557	127,022	53.0	3.5
Carriages and wagons	147,700	150,876	2.0	2.1
Confectionery	50,608	308,802	512.0	19.6
Flouring and grist mill products	2,093,570	1,208,877	—42.0	4.5
Foundry and machine shop products	109,097	192,150	76.0	.8
Furniture, factory product	....	119,641	....	1.3
Liquors, malt	651,137	1,133,090	74.0	5.8
Lumber and timber products	3,510,236	1,544,410	—56.0	2.7
Lumber and planing mill products	333,812	401,962	20.0	4.3
Plumbing and gas and steam fitting	85,339	115,814	35.0	4.1
Printing and publishing, newspapers, etc.	80,616	137,215	70.0	3.3
Tobacco, cigars and cigarettes	156,511	191,865	22.0	5.9
All other industries	1,855,918	2,282,013	23.0	....
Total	$9,157,501	$8,281,749	—9.6	2.3

MILWAUKEE.

Industries.	Value of Products.		Per cent. of increase.	Per cent. of total for state.
	1890.	1900.		
Agricultural implements	$596,873	$2,296,838	208.0	29.1
Bicycle and tricycle repairing	....	139,474	....	35.5
Bicycles and tricycles	....	1,223,549	....	43.7
Blacksmithing and wheelwrighting	289,384	372,638	28.0	11.1
Bookbinding and blank books	168,588	524,961	211.0	88.4
Boots and shoes, custom work	264,057	201,422	—23.0	31.6
Boots and shoes, factory product	1,617,534	2,195,928	35.0	45.8
Boxes, wooden packing	441,186	762,281	72.0	38.3
Brass castings and finishings	370,451	884,050	138.0	99.5
Bread and other bakery products	1,576,127	2,157,802	36.0	59.6
Brick and tile	396,154	163,500	—58.0	9.1
Brooms and brushes	98,903	178,689	80.0	61.2
Carpentering	3,581,904	3,324,734	—7.0	46.7
Carriages and wagons	794,563	385,330	—51.0	5.5
Cars and construction, R. R. shops	917,289	300,093	—67.0	4.7
Cheese, butter and condensed milk	....	169,225	....	.8
Chemicals	112,157	254,196	126.0	100.0
Clothing, men's custom work	1,390,754	1 387,133	—00.0	41.9
Clothing, men's, factory products	3,541,369	3,593,736	1.0	81.8
Clothing, women's, dressmaking	1,591,632	313,806	—80.0	55.2
Clothing, women's, factory products	235,630	188,991	—19.0	69.4
Coffee and spice, roasting and grinding	906,025	364,477	—59.0	79.7
Confectionery	770,341	1,040,400	37.0	66.2
Cooperage	828,578	716,867	—13.0	42.6
Dyeing and cleaning	56,505	113,795	101.0	81.1
Electrical apparatus and supplies	38,870	502,332	1140.0	54.4
Electrical construction and repairs	....	240,407	....	74.3
Enameling and enameled goods	....	1,708,171	....	87.4
Flouring and grist mill products	4,438,983	6,357,983	43.0	24.1
Food preparations	35,450	208,909	475.0	15.3
Foundry and machine shop products	5,568,445	14,495,362	163.0	65.1
Fur goods	752,511	795,872	5.0	87.1
Furniture, cabinet making and repairs	386,301	348,376	—9.0	64.6
Furniture, factory product	1,508,569	1,485,503	—1.0	17.1
Gloves and mittens	108,819	252,182	131.0	49.6
Hats and caps, except fur and wool	363,496	602,820	66.0	100.0
Hosiery and knit goods	1,114,025	1,223,203	9.0	49.2
Iron and steel	....	7,410,218	....	83.2
Iron work, agricultural, etc.	601,483	1,092,659	81.0	88.5

MILWAUKEE—CONTINUED.

Industries.	Value of Products.		Per cent. of increase.	Per cent. of total for state.
	1890.	1900.		
Leather, tanned, curried and finished	8,429,814	10,267,835	22.0	51.1
Liquors, malt	10,810,695	13,899,390	28.0	71.6
Lithographing and engraving	409,866	715,862	74.0	100.0
Lumber and planing mill products	2,380,659	2,152,994	—9.0	25.6
Malt	2,174,830	2,317,870	7.0	56.6
Marble and stone work	243,681	288,057	18.0	38.1
Masonry, brick and stone	2,216,857	1,364,039	—38.0	38.9
Mattresses and spring beds	541,002	575,701	6.0	3.13
Millinery and lace goods	....	524,185	....	99.0
Millinery, custom work	334,469	532,641	59.0	26.1
Mineral and soda waters	129,295	148,849	15.0	12.9
Monuments and tombstones	388,480	386,355	....	33.0
Painting, house, sign, etc.	945,973	984,586	18.0	54.8
Paper hanging	....	133,431	....	78.4
Paving and paving materials	1,070,248	500,573	—56.0	59.0
Photography	170,950	204,936	19.0	29.0
Plastering and stuccowork	90,400	317,268	250.0	90.5
Plumbing and gas and steam fitting	927,024	1,333,745	43.0	47.6
Printing and publishing, book and job	687,181	750,896	9.0	77.2
Printing and publishing, newspapers, etc.	1,436,184	1,680,003	17.0	40.9
Saddlery and harness	275,702	548,841	99.0	28.7
Sausage	311,513	532,806	71.0	98.5
Slaughtering & meat packing, wholesale	9,704,966	*13,045,979	34.0	94.2
Soap and candles	510,966	967,767	89.0	88.2
Soda water apparatus	155,850	152,300	—2.0	100.0
Steam fitting and heating apparatus	757,959	1,123,731	48.0	100.0
Tin and coppersmithing and sheet iron works	1,547,321	1,447,838	—6.0	54.1
Tobacco, chewing and smoking, and snuff	1,212,668	1,624,801	34.0	99.4
Tobacco, cigars and cigarettes	1,258,938	1,091,449	—13.0	33.5
Trunks and valises	614,054	969,022	57.0	62.1
Watch, clock and jewelry repairs	149,707	134,305	—10.0	25.3
Wirework, including rope and cable	116,525	105,619	—8.0	16.5
All other industries	12,057,709	10,055,457	....	....
Total	$97,503,951	$130,852,088	34.2	26.3

*Includes slaughtering and meat packing of Cudahy, Wis.

OSHKOSH.

Industries.	Value of Products		Per cent. of increase	Per cent. of total for state.
	1890.	1900.		
Carpentering	$398,619	$200,215	—49.0	2.8
Carriages and wagons	394,512	547,936	39.0	7.8
Flouring and grist mill products	266,100	116,224	—56.0	.4
Foundry and machine shop products	223,825	294,963	31.0	1.3
Furniture, factory product	552,525	720,826	30.0	8.2
Lumber and timber products	3,904,550	2,449,430	—37.0	4.3
Lumber and planing mill products	....	1,619,836	....	19.2
Tobacco, cigars and cigarettes	111,450	112,887	1.0	3.5
All other industries	2,769,045	1,718,931	....	....
Total	$8,620,626	$8,781,248	1.9	2.5

RACINE.

Industries.	Value of Products.		Per cent. of increase.	Per cent of total for state
	1890.	1900		
Agricultural implements	$1,979,613	$3,001,009	51.0	38.0
Boots and shoes, factory products	....	948,215	....	17.7
Carriages and wagons	1,902,536	2,749,653	44.0	39.5
Foundry and machine shop products	307,701	849,455	176.0	3.8
Hardware, saddlery	....	284,365	....	100.0
Leather, tanned, curried and finished	706,000	576,236	—18.0	2.8
Lumber, planing mill products	....	123,957	....	1.4
Printing and publishing, newspapers, &c.	113,341	120,418	6.0	2.9
Springs, steel, car and carriage	....	340,823	....	100.0
Trunks and valises	371,301	372,859	....	23.9
All other industries	3,081,861	5,935,7.6	....	....
Total	$8,462,359	$12,502,796	47.7	3.4

SHEBOYGAN.

Industries.	Value of products.	Per cent. of total for state.
Carpentering	$171,025	2.4
Furniture, factory product	3,189,045	36.7
All other industries	4,109,132	....
Total	$7,469,202	2.1

SUPERIOR.

Industries.	Value of products.	Per cent. of total for state.
Foundry and machine shop product	$218,296	.9
Liquors, malt	112,840	.6
Lumber and timber products	559,781	.9
Plumbing and gas and steam fitting	160,925	5.7
Printing and publishing, newspapers, etc.	153,454	3.7
All other industries	6,322,407	....
Total	$7,527,703	2.8

MANUFACTURES OUTSIDE OF CITIES OF 20,000 POPULATION.

When we have examined the census statistics of the state as a whole and of our six cities of over 20,000 population, we have exhausted all information as to the *kind* of manufactures in Wisconsin available in the published census. We have seen from the census statistics of *quantity* of manufactures of the several counties that there are important manufacturing districts in this state. Two of these districts, or groups of counties as we have considered them, contain all our cities of over 20,000 population. For the other manufacturing districts, and even for these two districts outside the six large cities, there is nothing in the census tables to show whether the manufacturing of any given place is diversified or given over to one or two industries; whether the leading industries are the manufacture of lumber, agricultural implements, flour and feed, butter and cheese, or what not.

The distribution of manufactures with reference to this particular consideration is shown in the following table:

DISTRIBUTION OF MANUFACTURES IN WISCONSIN IN LARGE CITIES, SMALL CITIES AND OUTSIDE OF CITIES—CENSUS OF 1900.

Location.	Total gross products of manufactures.	Per cent. of total for the state.
Milwaukee (includes $2,971,480 from North Milwaukee and South Milwaukee)	$126,757,929	35.1
Five remaining cities of over 20,000 population	44,562,698	12.4
All other urban manufactures (45 cities)	91,030,394	25.2
Entire state, exclusive of urban manufactures	98,467,921	27.3
Total for state	$360,818,942	100.0

From the foregoing table it is seen that the census statistics of the manufacturing industries in localities in Wisconsin covers less than half of the manufactures of the state. The remaining 53 per cent of our manufactures, 25.2 per cent coming from 45 cities and 27.3 per cent from the rest of the state, is without any qualifications or designation as to the kind or character in any city or locality. Some of these cities are surely of sufficient manufacturing importance to give rise to some curiosity as regards their industries. The city of Kenosha, for instance, shows a larger manufactured product than Sheboygan and 60 per cent more wage-earners than Superior. The cities of Appleton and Marinette together are credited with an annual manufactured product of $10,000,000 and there is nothing in the census to show its character. It seems impossible that any intelligent estimate of the industrial situation in this state can be had without some idea of the character and location of more than one half of our manufactures—the half, moreover, of the greater interest from the standpoint of future possibilities.

With the purpose of adding some information, though indefinite and incomplete, the following tables have been prepared. They are presented here, albeit, with some hesitancy and much misgiving, with the hope that they will throw some helpful light, incomplete and uncertain though it may be, upon an important phase of our industrial situation left by the census in obscure darkness. It is realized that from a scientific or statistical standpoint, more can probably be said against these figures than can be said for them. But it is believed that some information of a useful character will be found in the tables and some is better than none.

An explanation of the source and nature of the tables should make it possible for any careful student to avoid serious errors through dependence upon them. And an exposition of their principal shortcomings should enable any one to be safely conservative in their interpretation.

In the first place, it must be remembered that these figures are not based upon a census of manufactures. They are founded on two sets of basic data from two sources:

1st. The number of employes reported for each manufacturing establishment inspected by the Wisconsin Factory Inspection of 1901-02.

2nd. The average gross product per wage-earner in the several industries for the state as a whole, as shown by the Federal Census of 1900.

There are several considerations which must be taken into account in any estimate of the manufacturing of any locality or industry on such figures as these. With reference to the factory inspection as a basis, the following points of criticism should be borne in mind:

First, the factory inspection does not cover all of our manufactories. Its purpose is not a census. For the purposes of enforcing factory legislation, that inspectors should visit every establishment in the state, as the census enumerator aims to do would be both impossible and undesirable. Exclusive of the six largest cities (north and south Milwaukee included) the census reports 11,643 establishments employing on the average 70,532 wage-earners. Exclusive of the same cities, Wisconsin Factory Inspection for 1901–02 reports 1775 establishments inspected with 61,389 employes. Thus the factory inspection reaches only a small proportion of the establishments and not over 87 per cent of the employes. Because of other considerations, hereinafter to be enumerated, the real proportion of our manufactures covered by the Factory Inspection is probably not over 80 per cent. The bulk of the uninspected industries is represented by the small establishment engaged in repairs, milling, butter or cheese making, etc., and employing only two or three hands with small danger or possibility of violating our factory laws and, therefore, not requiring regular inspection. Taken collectively, however, these uninspected, small establishments represent a very considerable portion of our manufacturing industries. They produce about $17,000,000 of our butter and cheese factory products besides the larger part of the products of the many lines of repairing, custom work, etc. The relative importance of the uninspected manufactures in any given locality cannot be determined with even approximate accuracy because it may vary widely and is subject to no rule. But it can and should be borne in mind that in any given instance it *may* be *very* important. It may, in some instances, even include the whole of some important industry, especially if the industry in the particular place be represented by a single establishment.

Next to this incompleteness of the Factory Inspection figures is their lack of scientific accuracy in reporting the establishments that are inspected. The matter of noting the number of employes by the inspector is often the merest incident of his work. He makes his visit to examine the sanitary and other conditions under which the establishment operates, violations of the child labor laws, etc., and the inquiry as to the number of employes is calculated chiefly to determine how many persons are required to work under the conditions which he finds. The inspector has learned from his experience the time of the year when each line of industry in each section is most likely to be most fully employed. He times his inspection, in a general way, so as to make his visit when the leading industries of a community are in this condition, for it is under this condition that violations of the factory laws are most likely to be found. As a result, the tendency in factory inspection returns, particularly in the leading industries, is to report more than a representative number of employes. This in any locality might tend to give undue relative importance in these tables to any industry reported, particularly the more important industries. But since this tendency is not constant, bears no uniform ratio to the true representative number of employes, it cannot be corrected in any instance except by keeping in mind that it always exists as a possible element of error in the figures of each industry and in each locality.

These two considerations may affect the accuracy of any statement of the number of employes in the following tables. This inaccuracy may also be reflected in any estimate of product based upon the number of employes reported by factory inspection and the product per wage-earner in the census.

With reference to the use of this average product per wage-earner to determine output in any specific instance there are several criticisms which should be made. Some of these objections hold good independently and in addition to the liability of error in the number of employes reported. They would hold even if the number of employes was correctly representative. Others are the result of combining the two sets of figures.

In the first place this average product per wage-earner is in each case the average for many enterprises in several parts of the state, often of very far from identical character, and is exact only for an average establishment. An average establishment, in this sense, would have to be one in which all lines and conditions of the industry maintain in exactly the same proportions and relationships as in the industry as a whole in the state. Owing partly to the census classification of the several industries of the state it is almost impossible to have an actual average establishment or enterprise. The reasons for this are obvious. Industries over-lap. It becomes necessary to group industries of like character or industries frequently carried on in conjunction, under a single name as a single industry, as; "Brick and tile," "Paper and wood pulp," etc. Now, the average product per wage earner in the "Brick and tile" industry of the state might not be likely to be the average per wage-earner in an enterprise manufacturing brick, or an enterprise manufacturing tile, or an enterprise manufacturing both brick and tile unless the two products were manufactured in the same proportion as in the state as a whole, and even not then unless other things were equal. And likewise the "Paper and wood pulp" industries, generally carried on in conjunction and inseparable in the statistical reports. The census returns however include many paper mills making no wood pulp and many pulp mills making no paper. And we are obliged to take the same average figures for the pulp mill, the paper mill, and the paper and pulp mill, while there is reason to believe that there is a vast difference between the real averages in each case. This objection will be found to affect practically all industries in some degree. How much cannot of course be determined definitely in any case.

One more important element of error enters the estimates of product. It grows out of combination of the figures representing the number of *employes* as reported by Factory Inspection with the average product per wage-earner in each industry according to census. The former figures include in most cases, some employes who would not be classed as "wage-earners" in the census, being salaried employes, etc. Thus the average product per wage-earner based on the census would be in many cases too high for a representative average product per employe in the same manufacturing.

While these and other factors of uncertainty may enter with varying force in any or all the statements in the following tables, there is no way of knowing which statements they do affect or how seriously. Accordingly no effort has been made to correct the estimates to make allowances for the possible elements of error. At the head of each table for urban manufactures the census totals for all industries for the city is given showing the number of establishments, value of products, average number of wage-earners and the importance of the city's manufacturing in the state's total. While there is some discrepancy of time between the census date and the date of inspection, these figures should serve in a measure to help avoid unwarranted dependence upon incorrect estimates. One general correction will apply in nearly all of these figures. The result of leaving out many establishments in factory inspection and combining the number of *employes* reported (and frequently the highest number) with the average product per *wage-earner* to estimate the value of products would be generally to over emphasize the importance of the industries reported, particularly the larger ones, while other industries, appearing in the "miscellaneous," or not all, are given less than their relative importance.

There are many inaccuracies and short-comings in these tables. But they contain some information and therefore have some value, possibly a great deal. They show a wide spread diversity of manufacturing industry throughout most of the 45 cities as well as something of the character of our industries outside of urban manufactures.

URBAN MANUFACTURES OF WISCONSIN IN 45 CITIES OF LESS THAN 20,000 POPULATION, U. S. CENSUS 1900, AND WISCONSIN STATE FACTORY INSPECTION 1901-2.

Cities.	U. S. Census, 1900.			Inspection, 1901-2.	
	No. of establishments.	Value of products.	Average No. of wage earners	No of establishments.	No. of employes.
Antigo	65	$728,755	373	16	262
Appleton	240	5,330,669	2,226	49	1,770
Ashland	129	4,157,718	1,830	36	1,794
Baraboo	75	695,731	405	20	425
Beaver Dam	57	1,002,255	707	18	814
Beloit	103	3,185,080	2,055	40	2,089
Berlin	65	736,247	376	32	745
Chippewa Falls	72	2,131 067	555	16	627
De Pere	48	980,800	360	10	366
Eau Claire	148	4,366,230	1,858	42	2,191
Fond du Lac	188	3,386,822	1,834	46	1,674
Ft. Atkinson	67	781,299	392	11	528
Grand Rapids	66	1,129,078	503	15	426
Green Bay	191	3,469,160	1,719	39	1,944
Hudson	41	1,261,569	422	19	462
Janesville	184	3,670,820	1,710	63	1,651
Jefferson	66	828,924	370	20	301
Kaukauna	71	1,424,047	667	15	718
Kenosha	71	7,488,366	3,149	24	3,478
Madison	195	3,508,808	1,805	44	1,562
Manitowoc	135	2,268,348	1,146	46	1,441
Marinette	103	4,659,712	1,833	37	2,147
Marshfield	63	709,144	372	19	457
Menasha	57	2,751,270	1,575	13	1,548
Menomonie	50	1,533,139	697	18	766
Merrill	69	4,150,272	1,694	19	1,727
Monroe	62	455,899	217	15	151
Neenah	74	1,642,414	616	16	508
Oconto	44	1,732,887	440	12	801
Portage	72	502,234	324	14	262
Port Washington	65	1,037,318	811	8	872
Reedsburg	45	430,550	207	12	292
Rhinelander	62	1,855,433	781	18	929
Ripon	73	807,087	360	12	262
Sparta	56	343,759	147	8	594
Stevens Point	107	2,171,265	979	27	871
Stoughton	14	505,715	268	21	422
Tomah	47	743,615	212	6	386
Tomahawk	33	218,838	180	11	270
Two Rivers	45	1,177,621	971	6	550
Washburn	35	1,165,861	501	14	640
Watertown	85	1,381,393	606	25	605
Waupun	42	1,200,844	267	14	254
Wausau	137	3,658,439	1,643	34	1,644
Wauwatosa	37	3,663,892	2,312	12	576
Total	3,754	$91,030,394	42,471	1,012	42,792

NUMBER OF WAGE EARNERS, PRODUCTS AND AVERAGE PRODUCT PER WAGE EARNER, WISCONSIN, CENSUS 1900.

	Industries.	Average No. wage earners.	Value of products.	Average product per wage earner.
1.	Agricultural implements	3,289	$7,886,363	$2,397
2.	Awnings, tents and sails	81	126,036	1,555
3.	Boots and shoes, factory product	2,507	4,791,684	1,911
4.	Boxes, paper	328	240,926	730
5.	Boxes, wooden packing	1,290	1,989,663	1,542
6.	Brick and tile	1,469	1,795,993	1,222
7.	Bridges	23	28,984	1,260
8.	Brooms and brushes	165	291,599	1,767
9.	Buttons	106	63,125	595
10.	Carriage and wagon materials	117	193,982	1,658
11.	Carriages and sleds, children's	295	272,125	922
12.	Carriages and wagons	3,402	6,956,341	2,044
13.	Cars, repair and general shop construction by R. R. companies	4,502	6,306,823	1,401
14.	Clothing, men's, factory product	2,327	4,393,092	1,888
15.	Clothing, women's, factory product	253	271,991	1,075
16.	Confectionery	749	1,570,445	2,096
17.	Cooperage	1,047	1,683,180	1,607
18.	Cotton goods	347	316,061	910
19.	Coffee and spices, roasting and grinding	41	456,876	11,143
20.	Flouring and grist mill products	1,412	26,327,942	18,645
21.	Foundry and machine shop products	12,670	22,252,730	1,773
22.	Fruits and vegetables, canning, etc	676	1,007,765	1,490
23.	Fur goods	449	913,754	2,035
24.	Furniture, factory product	7,775	8,721,823	1,096
25.	Gloves and mittens	319	507,495	1,590
26.	Hosiery and knit goods	2,722	2,486,813	913
27.	Iron and steel	1,921	8,905,226	4,635
28.	Leather, tanned, curried and finished	5,262	20,074,373	3,815
29.	Liquors, malt	3,904	19,394,709	4,967
30.	Lumber and timber products	21,701	57,634,816	2,656
31.	Lumber, planing mill, sash, doors, etc	4,377	8,400,695	1,919
32.	Malt	366	4,089,715	11,174
33.	Marble and stone work	506	754,456	1,491
34.	Mattresses and spring beds	1,045	1,838,841	1,754
35.	Monuments and tombstones	542	1,169,897	2,158
36.	Paper and wood pulp	4,240	10,895,576	2,569
37.	Pickles, preserves and sauces	92	316,657	3,442
38.	Printing and publishing, book and job	716	972,2[illegible]3	1,357
39.	Printing and publishing, newspapers and periodicals	2,679	4,103,415	1,531
40.	Brass castings and finishings	426	888,755	2,086
41.	Refrigerators	576	749,412	1,322
42.	Saddlery and harness	678	1,906,652	2,812
43.	Ship and boat building	562	707,955	1,259
44.	Shirts	256	247,870	968
45.	Slaughtering and meat packing	1,361	13,601,125	9,993
46.	Starch	34	154,090	4,503
47.	Tinsmithing, copper and sheet iron wk.	1,453	2,675,548	1,841
48.	Tools, not elsewhere specified	67	107,172	1,600
49.	Trunks and valises	1,083	1,560,006	1,440
50.	Windmills	198	444,787	2,246
51.	Wirework and wire rope cable	199	638,797	6,243
52.	Woodenware	1,047	1,226,671	1,171
53.	Woolen goods	861	1,435,388	1,667
54.	Electrical apparatus	527	923,587	1,752
55.	Tobacco, chewing and smoking	300	1,632,354	5,441
56.	All industries	142,076	360,818,942	2,539
57.	All industries, except milling, brewing, malting and packing	135,033	297,405,451	2,202

ANTIGO, LANGLADE CO.

U. S. Census, 1900—Establishments, 65; products, $728,755; average number of wage earners, 373; per cent. of product to total for the state, 0.2 per cent.

Wis. Factory Inspection, 1901-1902—16 establishments, 262 employes.

Industries.	No. of employes reported.	Estimated gross value of products.	Per cent. of total for city.
Sash, doors, veneers and planing mill products	131	$251,389	34.7
Furniture, chairs	45	49,320	6.6
Lumber, sawmill products	15	39,840	5.3
Brewing	15	74,505	11.8
Flour and feed	12	225,740	31.4
Staves	12	19,284	2.4
Printing and publishing	15	21,660	2.8
Miscellaneous	17	37,400	5.0
Total	262	$719,138	100.0

APPLETON, ANTIGO CO.

U. S. Census, 1900—Establishments, 240; products, $5,330,669; average number of wage earners, 2,226; per cent. of product to total for the state, 1.5 per cent.

Wis. Factory Inspection, 1901-2—49 establishments, 1,770 employes.

Industries.	No. of employes reported.	Estimated gross value of products.	Per cent. of total for city.
Paper and wood pulp	965	$2,479,065	55.1
Machinery	202	358,146	8.0
Furniture	86	94,256	2.2
Canning	77	38,740	0.9
Knit goods	67	61,171	1.4
Textiles	69	88,872	2.0
Toys, etc.	46	78,412	1.8
Printing and publishing	44	63,536	1.5
Flour and feed	30	559,350	12.3
Sash, doors and planing mill products	23	44,137	1.0
Agricultural implements	16	38,352	0.9
Brewing	26	129,143	2.8
Malting	25	279,350	6.3
Clothing	18	23,580	0.5
Hubs and spokes	15	24,870	0.6
Paper boxes	9	6,570	0.0
Monuments	7	15,106	0.3
Miscellaneous	45	99,000	2.3
Total	1,770	$4,481,676	100.0

ASHLAND, ASHLAND CO.

U. S. Census 1905—Establishments, 129; products, $4,157,718; average number of wage earners, 1,830; per cent. of products to total for the state, 1.2 per cent.

Wis. Factory Inspection, 1901-2—36 establishments, 1,794 employes.

Industries.	No of employes reported.	Estimated gross value of products.	Per cent. of total for city
Lumber saw mill products	1,311	$3,482,016	73.0
Pig iron	150	695,250	14.0
Machinery	69	122,337	2.5
R. R. shops	100	140,100	2.6
Wood pulp	49	125,941	2.5
Printing and publishing	36	51,984	7.2
Brewing	16	79,472	1.5
Miscellaneous	63	138,600	2.7
Total	1,794	$4,835,700	100.0

BARABOO, SAUK CO.

U. S. Census 1900—Establishments, 75; products, $695,731; average number of wage earners, 405; per cent. of products to total for the state, 0.2 per cent.

Wis. Factory Inspection, 1901-2—20 establishments, 425 employes.

Industries.	No. of employes reported.	Estimated gross value of products.	Per cent. of total for city.
R. R. shops	148	$207,348	30.8
Textiles	121	201,707	30.1
Canning	71	35,760	5.3
Wagons	10	20,440	3.6
Woodworking	10	19,190	2.7
Brewing	17	84,439	12.3
Machine shop and foundry	7	12,411	2.0
Miscellaneous	41	90,200	13.2
Total	425	$671,495	100.0

BEAVER DAM, DODGE CO.

U. S. Census, 1900—Establishments, 57; products, $1,002,255; average number wage earners, 707; per cent. of products to total for the state, 0.3 per cent.

Wis. Factory Inspection, 1901-2—18 establishments, 814 employes.

Industries.	No. of employes reported.	Estimated gross value of products.	Per cent. of total for city.
Iron	300	$1,390,500	62.2
Textiles	232	298,816	13.2
Machinery	147	260,631	11.7
Stoves	80	141,840	6.4
Brewing	8	39,736	1.8
Monuments	7	15,106	0.7
Miscellaneous	40	88,000	40
Total	814	$2,234,629	100.0

BELOIT, ROCK CO.

U. S. Census, 1900—Establishments, 103; products, $3,185,080; average number wage earners, 2,055; per cent. of products to total for the state, 0.9 per cent.

Wis. Factory Inspection, 1901-2—40 establishments, 2,089 employes.

Industries.	No. of employes reported.	Estimated gross value of products.	Per cent. of total, for city.
Machinery and pumps	1,478	$2,620,494	68.7
Shoes	175	334,425	8.8
Clothing	150	196,500	5.2
Tools	54	86,400	2.3
Sash, doors and planing mill products	52	99,788	2.6
Paper	33	84,777	2.3
Wagons and carriages	26	43,108	1.2
Printing and publishing	22	31,768	0.8
Gloves	15	23,850	0.6
Sheet metal	15	27,615	0.7
Boxes	8	12,336	0.3
Flour and feed	7	130,515	3.4
Miscellaneous	54	118,800	3.1
Total	2,089	$3,810,376	100.0

BERLIN, GREEN LAKE CO.

U. S. Census, 1900—Establishments, 65; products, $736,247; average number of wage earners, 376; per cent. of products to total for state, 0.2 per cent.

Wis. Factory Inspection, 1901-2—32 establishments, 745 employes.

Industries.	No. of employes reported.	Estimated gross value of products	Per cent. of total for city.
Gloves	245	$389,550	16.2
Stone, building and paving	195	290,745	11.9
Flour and feed	66	1,230,570	50.5
Tanning	45	171,675	7.0
Furs	33	67,155	2.7
Brooms	30	53,010	2.2
Shoes	26	49,686	2.0
Brick	17	20,774	0.8
Machinery	15	26,595	1.1
Cooperage, tubs and boxes	16	25,712	1.1
Knit goods	11	10,043	0.4
Miscellaneous	46	101,200	4.1
Total	745	$2,436,715	100.0

CHIPPEWA FALLS, CHIPPEWA CO.

U. S. Census, 1900—Establishments, 72; products, $2,131,067; average number of wage earners, 555; per cent. of products to total for state, 0.6 per cent.

Wis. Factory Inspection, 1901-2—16 establishments, 627 employes.

Industries.	No of employes reported.	Estimated gross va ue of products.	Per cent. of total for city.
Lumber, saw mill products	406	$1,078,338	62.6
Sash, doors and planing mill products	73	140,087	7.7
Brick	26	31,772	1.9
Brewing	21	104,307	6.1
Flour and feed	10	186,450	10.9
Printing and publishing	14	20,216	1.2
Wagons and carriages	12	24,528	1.5
Textiles	15	19,275	1.1
Miscellaneous	50	121,000	7.0
Total	627	$1,725,971	100.0

DE PERE, BROWN CO.

U. S. Census, 1900—Establishments, 48; products, $980,800; average number of wage earners, 360; per cent. of products to total for state, 0.3 per cent.

Wis. Factory Inspection, 1901-2—10 establishments, 366 employes.

Industries.	No. of employes reported.	Estimated gross value of products.	Per cent. of total for city.
Paper	280	$719,320	67.1
Machinery	32	56,736	5.3
Printing and publishing	15	21,660	2.0
Flour	16	238,320	22.3
Knit goods	12	10,944	1.1
Miscellaneous	11	24,200	2.2
Total	366	$1,071,180	100.0

EAU CLAIRE, EAU CLAIRE CO.

U. S. Census, 1900—Establishments, 148; products, $4,366,230; average number of wage earners, 1,858; per cent. of products to total for state, 1.27 per cent.

Wis. Factory Inspection, 1901-2—42 establishments; 2,191 employes.

Industries.	No. of employes reported.	Estimated gross value of products.	Per cent. of total for city.
Lumber, saw mill products	755	$2,005,280	41.0
Paper and pulp	325	834,935	17.1
Furniture	163	178,648	3.7
Canning	100	49,170	1.0
Refrigerators	80	105,760	2.2
Machinery	82	145,386	3.0
Boxes, wooden	97	149,574	3.1
Mill supplies	81	143,813	3.0
Shoes	80	152,880	3.2
Sash, doors and planing mill products	59	113,221	2.3
Printing and publishing	72	103,968	2.1
Textiles	56	71,528	1.5
Meat packing	35	349,755	7.1
Brewing	23	114,241	2.3
Flour and feed	12	223,740	4.6
Wagons and carriages	19	38,836	0.8
Trunks	18	25,920	0.5
Miscellaneous	34	74,800	1.5
Total	2,191	$4,881,455	100.0

FOND DU LAC, FOND DU LAC CO.

U. S. Census, 1900—Establishments, 188; products, $3,386,822; average number of wage earners, 1,834; per cent. of products to total for state, 0.9 per cent.

Wis. Factory Inspection, 1901-2—46 establishments, 1,674 employes.

Industries.	No. of employes reported.	Estimated gross value of products.	Per cent of total for city.
Furniture	313	$342,048	9.8
Refrigerators	230	304,060	8.7
Clothing	201	263,310	7.4
Lumber, saw mill products	164	435,584	12.2
Tanning	250	953,750	27.2
Canning	100	49,170	1.4
Carriages and wagons	75	83,300	2.4
Machinery	50	88,650	2.6
Sash doors, and planing mill products	35	67,165	1.9
Agricultural implements	22	52,734	1.5
Awnings	35	54,425	1.6
Brewing and malting	27	134,109	3.6
Flour and feed	18	335,610	9.7
Miscellaneous	154	338,800	9.8
Total	1,674	$3,502,715	100.0

FORT ATKINSON, JEFFERSON CO.

U. S. Census, 1900—Establishments, 67; products, $781,299; average number of wage earners, 392; per cent. of products to total for state, 0.2 per cent.

Wis. Factory Inspection, 1901-2—11 establishments, 528 employes.

Industries.	No. of employes reported.	Estimated gross value of products.	Per cent. of total for city.
Chairs	225	$246,600	33.7
Canning	150	74,500	10.2
Machinery	100	177,300	24.3
Creamery	12	139,680	19.3
Miscellaneous	41	90,200	12.5
Total	528	$728,280	100.0

GRAND RAPIDS, WOOD CO.

U. S. Census, 1900—Establishments, 66; products, $1,129,078; average number of wage earners, 503; per cent. of product to total for state, 0.3 per cent.

Wis. Factory Inspection, 1901-2—15 establishments, 426 employes.

Industries.	No. of employes reported.	Estimated gross value of products.	Per cent. of total for city.
Furniture	114	$124,944	12.3
Paper and pulp	97	249,193	24.2
Lumber, saw mill products	91	241,696	23.8
Wagon stock	66	109,428	10.7
Machinery	24	43,552	4.3
Flour and feed	11	205,095	19.7
Miscellaneous	23	50,600	5.0
Total	426	$1,024,508	100.0

GREEN BAY, BROWN CO.

U. S. Census, 1900—Establishments, 191; products, $3,469,160; average number of wage earners, 1,719; per cent. of products to total for state, 1.0 per cent.

Wis. Factory Inspection, 1901-2—39 establishments, 1,944 employes.

Industries.	No. of employes reported.	Estimated gross value of products.	Per cent. of total for city.
Lumber, saw mill products	425	$1,128,800	23.0
Sash, doors and planing mill products	184	353, 96	7.2
Canning	298	445,510	9.1
Confectionery	215	550,640	11.2
Furniture	150	164,400	3.4
Machinery	120	212,760	4.2
Cooperage	85	136,595	2.8
Boxes, wood	72	41,024	0.8
Spices and coffee, milled	56	624,008	12.7
Brewing	68	337,756	6,9
Paper	49	125,881	2.6
Flour and feed	12	223,740	4.6
Carriages and wagons	14	28,616	0.6
Miscellaneous	196	531,200	10.8
Total	1,944	$4,904,026	100.0

HUDSON, ST. CROIX CO.

U. S. Census, 1900—Establishments, 41; products, $1,261,569; average number of wage earners, 422; per cent. of product to total for state, 0.3 per cent.

Wis. Factory Inspection, 1901-2—19 establishments, 462 employes.

Industries.	No. of employes reported.	Estimated gross value of products.	Per cent. of total for city.
R. R. shops	261	$365,661	42.6
Lumber, saw mill products	120	318,720	37.2
Boxes	38	58,596	6.9
Brewing	7	34,769	4.0
Miscellaneous	36	79,200	9.3
Total	462	$856,946	100.0

JANESVILLE, ROCK CO.

U. S. Census, 1900—Establishments, 184; products, $3.670.820; average number of wage earners, 1,710; per cent. of product to total for state, 1.0 per cent.

Wis. Factory Inspection, 1901-2—63 establishments, 1,651 employes.

Industries.	No. of employes reported.	Estimated gross value of products.	Per cent. of total for city.
Agricultural implements	254	$608,838	16.3
Textiles	231	297,528	8.0
Furniture	127	139,192	3.7
Shoes	110	210,210	5.6
Barbed wire	95	593,185	15.9
Carriages and wagons	77	157,388	4.2
Sash, doors, and planing mill products	65	124,735	3.3
R. R. Shops	79	110,679	3.0
Clothing	74	96,940	2.6
Knit goods	75	67,550	1.8
Machinery	54	95,742	2.6
Tobacco	65	119,702	3.2
Boxes	59	90,978	2.4
Printing and publishing	35	50,540	1.4
Flour and feed	25	466,125	12.5
Buttons	35	20,825	0.6
Brewing	19	94,373	2.5
Saddlery and harness	16	44,992	1.2
Miscellaneous	156	343,200	9.2
Total	1,651	$3,732,722	100.0

JEFFERSON, JEFFERSON CO.

U. S. Census, 1900—Establishments, 66; products, $828,924; average number of wage earners, 370; per cent. of products to total for the state, 0.2 per cent.

Wis. Factory Inspection, 1901-2—20 establishments, 301 employes.

Industries.	No of employes reported	Estimated gross value of products.	Per cent. of total for city.
Shoes	120	$229,320	23.8
Brewing and malting	41	204,647	21.2
Meat packing	30	299,790	31.2
Wagons	27	55,188	5.7
Furniture	23	25,208	2.6
Sash, doors, and planing mill products	20	38,380	4.0
Tanning	15	57,225	6.0
Machinery	6	10,638	1.1
Miscellaneous	19	41,800	4.4
Total	301	$962,196	100.0

KAUKAUNA, OUTAGAMIE CO.

U. S. Census, 1900—Establishments, 71; products, $1,424,047; average number of wage earners, 667; per cent. of product to total for the state, 0.4 per cent.

Wis. Factory Inspection, 1901-2—15 establishments, 718 employes.

Industries.	No. of employes reported.	Estimated gross value of products.	Per cent. of total for city.
Paper and pulp	457	$1,175,033	75.1
R. R. shops	220	308,220	19.7
Machinery	17	30,141	1.9
Miscellaneous	24	52,800	3.3
Total	718	$1,566,194	100.0

KENOSHA, KENOSHA CO.

U. S. Census, 1900—Establishments, 71; products, $7,488,366; average number of wage earners, 3,149; per cent. of products to total for the state, 2.1 per cent.

Wis. Factory Inspection, 1901-2—24 establishments, 3,478 employes.

Industries.	No. of employes reported.	Estimated gross value of products.	Per cent. of total for city.
Tanning	750	$2,861,250	43.0
Furniture, beds	1,061	1,162,856	17.4
Knit goods	800	730,400	10.9
Brass, etc.	240	500,640	7.5
Brass goods, lamps, etc.	88	372,086	5.6
Carriages and wagons	285	582,540	8.7
Spring beds	65	114,010	1.7
Machinery	36	63,828	1.0
Toys	37	34,114	0.5
Sash, doors, and planing mill products	24	46,056	0.7
Miscellaneous	92	202,400	3.0
Total	3,478	$6,670,180	100.0

MADISON, DANE CO.

U. S. Census, 1900—Establishments, 195; products, $3,508,808; average number of wage earners, 1,805; per cent. of products to total for the state, 1.0 per cent.

Wis. Factory Inspection, 1901-2—44 establishments, 1,562 employes.

Industries.	No. of employes reported.	Estimated gross value of products.	Per cent. of total for city.
Machinery	243	$430,839	13.2
Agricultural implements	381	914,019	27.8
Electrical apparatus	242	423,984	12.9
Printing and publishing	260	375,440	11.4
Sash, doors and planing mill products	94	180,386	5.5
R. R. shops and round house	59	82,659	2.5
Brewing	58	288,086	8.8
Confectionery	52	108,992	3.3
Shoes	41	78,851	2.4
Saddlery and harness	19	53,428	1.7
Carriages and wagons	16	32,704	1.0
Flour and feed	6	111,870	3.4
Miscellaneous	91	200,200	6.1
Total	1,562	$3,280,958	100.0

MANITOWOC, MANITOWOC CO.

U. S. Census, 1900—Establishments, 135; products, $2,268,348; average number of wage earners, 1,146; per cent. of product to total for the state, 0.6 per cent.

Wis. Factory Inspection, 1901-2—46 establishments, 1,411 employes.

Industries.	No. of employes reported.	Estimated gross value of products.	Per cent of. total for city.
Shipbuilding	406	$511,154	18.7
Machinery	170	301,410	11.1
Brewing	141	697,347	25.3
Furniture	166	181,936	6.7
Canning	141	70,030	2.6
Agricultural implements	87	208,339	7.7
Sash, doors and planing mill products	43	82,517	3.0
Printing and publishing	31	44,764	1.7
Carriages and wagons	19	38,836	1.4
Brewing	12	59,604	2.2
Clothing	14	18,340	0.7
Flour and feed	7	130,515	4.8
Miscellaneous	174	382,800	14.1
Total	1,411	$2,727,592	100.0

MARINETTE, MARINETTE CO.

U. S. Census, 1900—Establishments, 103; products, $4,659,712; average number of wage earners, 1,833; per cent. of product to total for the state, 1.3 per cent.

Wis. Factory Inspection, 1901-2—37 establishments, 2,147 employes.

Industries.	No. of employes reported.	Estimated gross value of products.	Per cent. of total for city
Lumber, saw mill products	1,360	$3,612,160	68.5
Machinery	263	466,299	8.8
Paper	174	447,006	8.5
Boxes, wooden	175	259,850	4.9
Sash, doors and planing mill products	65	124,735	2.4
Printing and publishing	42	60,648	1.2
Flour and feed	9	167,705	3.2
Miscellaneous	59	129,800	2.5
Total	2,147	$5,268,203	100.0

MARSHFIELD, WOOD CO.

U. S. Census, 1900—Establishments, 63; products, $709,144; average number of wage earners, 372; per cent. of product to total for the state, 0.2 per cent.

Wis. Factory Inspection, 1901-2—19 establishments, 457 employes.

Industries.	No of employes reported.	Estimated gross value of products.	Per cent. of total for city.
Veneers and planing mill products	144	$276,336	26.0
Staves	47	75,529	7.1
Mattresses	35	61,390	5.7
Machinery	15	26,595	2.5
Printing and publishing	17	24,548	2.3
Brewing	10	49,670	4.7
Flour and feed	8	149,160	14.1
Miscellaneous	181	398,200	37.6
Total	457	$1,061,428	100.0

MENASHA, WINNEBAGO CO.

U. S. Census, 1900—Establishments, 57; products, $2,751,270; average number of wage earners, 1,575; per cent. of product to total for the state, 0.8 per cent.

Wis. Factory Inspection, 1901-2—13 establishments, 1,548 employes.

Industries.	No. of employes reported.	Estimated gross value of products.	Per cent. of total for city.
Woodenware	1,030	$1,206,130	48.3
Paper	353	906,857	36,4
Woolens	61	103,687	4.2
Shingles	40	106,240	4.2
Foundry	24	43,532	1.7
Brewing	16	79,472	3.2
Planing mill products	10	19,190	.8
Miscellaneous	14	30,800	1.2
Total	1,548	$2,495,908	100.0

MENOMONIE, DUNN CO.

U. S. Census, 1900—Establishments, 50; products, $1,533,139; average number of wage earners, 697; per cent. of product to total for the state, 0.4 per cent.

Wis. Factory Inspection, 1901-2—18 establishments, 766 employes.

Industries.	No. of employes reported.	Estimated gross value of products.	Per cent. of total of city.
Lumber, saw mill products	375	$996, 00	65.1
Brick	302	369,044	34.1
Machinery	32	56,736	3.7
Printing and publishing	17	24,448	1.6
Sash, doors and planing mill products	15	28,785	1.9
Miscellaneous	25	55,000	3.6
Total	766	$1,530,013	100.0

MERRILL, LINCOLN CO.

U. S. Census, 1900—Establishments, 69; products, $4,150,272; average number of wage earners, 1,694; per cent. of product to total for the state, 1.2 per cent.

Wis. Factory Inspection, 1901-2—19 establishments, 1,727 employes.

Industries.	No. of employes reported	Estimated gross value of products.	Per cent. of total for city.
Sash, door and planing mill products	1,161	$2,227,959	61.7
Lumber, saw mill products	284	754,304	20.9
Tanning	20	76,300	2.1
Machinery	15	26,595	.7
Printing and publishing	17	24,548	.6
Miscellaneous	230	506,000	14.0
Total	1,727	$3,615,706	100.0

MONROE, GREEN CO.

U. S. Census, 1900—Establishments, 62; products, $455,899; average number of wage earners, 217; per cent. of product to total for the state, 0.1 per cent.

Wis. Factory Inspection, 1899-1900—15 establishments, 151 employes.

Industries.	No. of employes reported.	Estimated gross value of products.	Per cent. of total for city.
Carriages and wagons	65	$132,860	42.8
Printing and publishing	22	31,768	10.2
Brick	21	25,662	8.2
Sash, doors and planing mill products	15	28,785	9.3
Brewing	11	54,637	17.5
Miscellaneous	17	37,400	12.0
Total	151	$311,112	100.0

NEENAH, WINNEBAGO CO.

U. S. Census, 1900—Establishments, 74; products, $1,642,414; average number of wage earners, 616; per cent. of product to total for the state, 0.5 per cent.

Wis. Factory Inspection, 1901-2—16 establishments, 508 employes.

Industries.	No. of employes reported.	Estimated gross value of products.	Per cent. of total for city.
Paper	268	$698,492	57.7
Stoves	67	118,791	9.8
Canning	40	20,860	1.7
Shoes	40	76,440	6.3
Knit goods	38	34,694	2.9
Sash, doors and planing mill products	21	40,299	3.3
Printing and publishing	12	17,328	1.4
Flour and feed	10	180,645	15.0
Machinery	8	14,184	1.2
Miscellaneous	4	8,800	0.7
Total	508	$1,210,533	100.0

OCONTO, OCONTO CO.

U. S. Census, 1900—Establishments, 44; products, $1,732,887; average number of wage earners, 440; per cent. of product to total for the state, 0.5 per cent.

Wis. Factory Inspection, 1901-2—12 establishments, 801 employes.

Industries.	No. of employes reported.	Estimated gross value of products.	Per cent. of total for city.
Sash, doors and planing mill products	354	$675,326	32.3
Lumber, saw mill products	242	908,352	43.5
Paper	150	385,350	18.3
Canning	23	34,270	1.6
Brewing	10	49,670	2.4
Printing and publishing	10	14,440	0.7
Miscellaneous	12	26,400	1.2
Total	801	$2,093,808	100.0

PORTAGE, COLUMBIA CO.

U. S. Census, 1900—Establishments, 72; products, $502,234; average number of wage earners, 324; per cent. of product to total for the state, 0.1 per cent.

Wis. Factory Inspection, 1901-2—14 establishments, 262 employes.

Industries.	No. of employes reported.	Estimated gross value of products.	Per cent. of total for city.
Knit goods	164	$149,732	31.8
Clothing	32	41,920	8.7
Publishing and printing	24	34,656	7.3
Brewing	11	54,637	11.5
Flour	8	149,160	31.6
R. R. shops and round house	9	12,609	2.6
Miscellaneous	14	30,800	6.5
Total	262	$473,514	100.0

PORT WASHINGTON, OZAUKEE CO.

U. S. Census, 1900—Establishments, 65; products, $1.037,318; average number of wage earners, 811; per cent. of products to total for the state, 0.3 per cent.

Wis. Factory Inspection, 1901-2—8 establishments, 872 employes.

Industries.	No. for employes reported.	Estimated gross value of products.	Per cent. of to al for city.
Furniture and chairs	681	$746,776	64.8
Foundry and machine shop	150	265,950	23.1
Tanning	30	114,450	10.0
Miscellaneous	11	24,200	2.1
Total	872	$1,151,376	100.0

REEDSBURG, SAUK CO.

U. S. Census, 1900—Establishments, 45; products, $430,550; average number of wage earners, 207; per cent. of products to total for state, 0.1 per cent.

Wis. Factory Inspection, 1901-2—12 establishments, 292 employes

Industries.	No of employes reported.	Estimated gross value of products.	Per cent. of total for city.
Woolens	118	$196,706	50.6
Canning	100	49,170	12.6
Clothing	22	28,820	7.4
Miscellaneous	52	114,400	29.4
Total	292	$389,096	100.0

RHINELANDER, ONEIDA CO.

U. S. Census, 1900—Establishments, 62; products, $1,855,453; average number of wage earners, 781; per cent. of products to total for state, 0.5 per cent.

Wis. Factory Inspection, 1901-2—18 establishments, 929 employes.

Industries.	No. of employes reported.	Estimated gross value of products.	Per cent of. total for city.
Sash, doors and planing mill products	401	$769,519	36.6
Lumber, sawmill products	205	544,480	25.6
Printing and publishing	82	228,408	10.9
Machinery	14	24,822	1.2
Brewing	13	64,571	3.1
Miscellaneous	214	470,800	22.6
Total	929	$2,102,600	100.0

RIPON, FOND DU LAC CO.

U. S. Census, 1900—Establishments, 73; products, $807,087; average number of wage earners, 360; per cent. of products to total for state, 0.2 per cent.

Wis. Factory Inspection, 1901-2—12 establishments, 262 employes.

Industries.	No. of employes reported.	Estimated gross value of products.	Per cent. of total for city.
Knit goods	112	$102,256	28.0
Gloves	69	109,710	30.1
Carriages	25	51,100	14.0
Canning	11	5,960	1.6
Veneers	12	23,028	6.3
Miscellaneous	33	72,600	20.0
Total	262	$364,654	100.0

SPARTA, MONROE CO.

U. S. Census, 1900—Establishments, 56; products, $343.759; average number of wage earners, 147; per cent. of product to total for the state, 0.1 per cent.

Wis. Factory Inspection, 1901-2—8 establishments, 594 employes.

Industries.	No. of employes. reported.	Estimated gross value of products	Per cent. of total for city.
Cigars and tobacco	550	$995,520	92.7
Machinery	18	31,914	3.0
Printing and publishing	11	15,884	1.5
Sash, doors and planing mill products	7	13.433	1.2
Miscellaneous	8	17,600	1.6
Total	594	$1,074,351	100.0

STEVENS POINT, PORTAGE CO.

U. S. Census, 1900—Establishments, 107; products, $2,171,265; average number of wage earners, 979; per cent. of product to total for the state, 0.6 per cent.

Wis. Factory Inspection, 1901-2—27 establishments, 871 employes.

Industries.	No of employes reported.	Estimated gross value of products.	Per cent. of total for city.
Paper	320	$822,080	38.3
Lumber, sawmill products	170	451,520	21.0
Furniture	161	176,456	8.2
Sash, doors and planing mill products	38	72,922	3.4
Boxes	30	46,260	2.2
Machinery	28	49,644	2.3
Mattresses	20	35,080	1.6
Flour and feed	15	279,675	13.1
Printing and publishing	13	18,772	.9
Starch	11	49,533	2.3
Miscellaneous	65	143,000	6.7
Total	871	$2,144,942	100.0

STOUGHTON, DANE CO.

U. S. Census, 1900—Establishments, 14; products, $505,715; average number of wage earners, 263; per cent. of product to total for the state, 0.1 per cent.

Wis. Factory Inspection, 1901-2—21 establishments, 422 employes.

Industries.	No. of employes reported.	Estimated gross value of products.	Per cent. of total for city.
Carriages and wagons	342	$838,848	85.0
Tobacco	46	81,615	8.2
Printing	11	15,884	1.6
Miscellaneous	23	50,600	5.2
Total	422	$986,947	100.0

TOMAH, MONROE CO.

U. S. Census, 1900—Establishments, 47; products, $743,615; average number of wage earners, 212; per cent. of product to total for the state, 0.2 per cent.

Wis. Factory Inspection, 1901-2—6 establishments, 386 employes.

Industries.	No. of employes reported.	Estimated gross value of products	Per cent of total for city.
Bridge building	70	$88,200	12.7
Sash. doors and planing mill products	301	577,617	83.4
Printing and publishing	7	10,108	1.4
Miscellaneous	8	17,600	2.5
Total	386	$693,525	100.0

TOMAHAWK, LINCOLN CO.

U. S. Census, 1900—Establishments, 33; products, $218,838; average number of wage earners, 180; per cent. of product to total for the state, 0.1 per cent.

Wis. Factory Inspection, 1901-2—11 establishments, 270 employes.

Indurtries.	No. of employes reported.	Estimated gross value of products.	Per cent of total for city.
Lumber, sawmill products	228	$605,568	83.2
Iron	15	69,525	9.5
Printing and publishing	9	12,996	1.8
Miscellaneous	18	39,600	5.5
Total	270	$727,689	100.0

TWO RIVERS, MANITOWOC CO.

U. S. Census, 1900—Establishments, 45; products, $1,177,621; average number of wage earners, 971; per cent. of product to total for the state, 0.3 per cent.

Wis. Factory Inspection, 1901-2—6 establishments, 550 employes.

Industries.	No. of employes reported.	Estimated gross value of products.	Per cent. of total for city.
Lumber, sawmill products	149	$395,744	34.0
Veneers	60	115,140	9.9
Printers' supplies	229	406,017	35.0
Miscellaneous	112	246,400	21.1
Total	550	$1,163,301	100.0

WASHBURN, BAYFIELD CO.

U. S. Census, 1900—Establishments, 35; products, $1,165,861; average number of wage earners, 501; per cent. of products to total for the state, 0.3 per cent.

Wis. Factory Inspection, 1901-2—14 establishments, 640 employes.

Industries.	No. of employes reported.	Estimated gross value of products.	Per cent. of total for city.
Lumber, sawmill products	557	$1,479,392	91.5
Crates and reels	55	84,810	5.2
Printing and publishing	8	11,552	.7
Miscellaneous	20	44,000	2.6
Total	640	$1,619,754	100.0

WATERTOWN, JEFFERSON CO.

U. S. Census, 1900—Establishments, 85; products, $1,381,393; average number of wage earners, 606; per cent. of products to total for the state, 0.4 per cent.

Wis. Factory Inspection, 1901-2—25 establishments, 605 employes.

Industries.	No of employes reported.	Estimated gross value of products.	Per cent. of total for city.
Confectionery	109	$228,464	12.5
Brewing	31	153,977	8.4
Boxes and bee hives	84	129,528	7.1
Boxes, paper	95	69,350	3.8
Shoes	48	91,728	5.0
Malting	25	279,350	15.2
Flour and feed	26	484,770	26.5
Table slides	22	24,112	1.3
Plumbing	40	88,440	4.6
Machinery	16	28,368	2.1
Monuments	13	28,054	2.0
Miscellaneous	96	211,200	11.5
Total	605	$1,817,341	100.0

WAUPUN, FOND DU LAC AND DODGE COUNTIES.

U. S. Census, 1900—Establishments, 42; products, $1,200,844; average number of wage earners, 267; per cent. of products to total for the state, 0.3 per cent.

Wis. Factory Inspection, 1901-2—14 establishments, 254 employes.

Industries.	No. of employes reported.	Estimated gross value of products.	Per cent. of total for city.
Windmills	60	$134,760	25.3
Carriages and wagons	48	98,112	18.4
Shoes	48	91,728	17.3
Boxes	13	20,046	3.8
Miscellaneous	85	187,000	35.2
Total	254	$531,646	100.0

WAUSAU, MARATHON CO.

U. S. Census, 1900—Establishments, 137; products, $3,658,439; average number of wage earners, 1,643; per cent. of product to total for stock, 1.0 per cent.

Wis. Factory Inspection, 1901-2—34 establishments, 1,644 employes.

Industries.	No. of employes reported.	Estimated gross value of products	Per cent. of total for city
Sash, doors and planing mill products	6 3	$1,157,157	28.7
Boxes	305	470,310	11.6
Lumber, sawmill products	400	1,062,400	26.7
Machinery	69	122,337	3.0
Flour and feed	35	652,575	16.2
Printing and publishing	32	46,208	1.1
Brewing	29	144,043	3.6
Miscellaneous	171	278,400	9.1
Total	1,644	$4,033,430	100.0

WAUWATOSA, MILWAUKEE CO.

U. S. Census, 1900—Establishments, 37; products, $3,663,892; average number of wage earners, 2,312; per cent. of product to total for state, 1 0 per cent.

Wis. Factory Inspection, 1901-2—12 establishments; 576 employes.

Industries.	No. of employes reported.	Estimated gross value of products.	Per cent of. total for city.
Brewing	296	$1,470,232	77.6
Brick	143	174,746	9.2
Stone	59	87,969	4.3
Sash, doors and planing mill products	15	28,785	1.6
Miscellaneous	63	138,606	7.3
Total	576	$1,900,332	100.0

MANUFACTURING OUTSIDE OF CITIES.

Showing persons employed in various manufacturing industries, as reported by Wisconsin factory inspecton, 1901-2, for the state, outside of cities, reported in U. S. census, under "Urban Manufactures," together with estimated gross value of products of establishments inspected.

Industries.	No of employes reported.	Estimated gross value of products.	Per cent. of all industries.
Lumber, sawmill products	6,960	$18,485,760	38.3
Paper and pulp	1,522	3,907,449	8.0
Iron and steel	445	2,062,575	4.2
Flour and feed	374	6,973,230	14.3
Foundry and machine shops	465	824,445	1.7
Sash, doors and planing mill products	538	1,032,422	2.1
Leather, tanned, etc.	506	1,930,390	4.0
Canning	755	372,500	.8
Furniture	421	459,316	.9
Brewing	185	918,895	1.9
Creamery products	275	3,108,325	6.4
Printing and publishing	331	477,964	1.0
Woodenware	90	105,390	.2
Electrical apparatus	140	245,280	.5
Woolens	207	345,069	.7
Lime and cement	231	318,780	.6
Mineral water	94	294,972	.6
R. R. shop products	98	137,298	.3
Stone	214	307,785	.6
Bottling	30	105,000	.2
Cooperage	339	544,773	1.1
Wagons	228	466,032	1.0
Agricultural implements	284	680,748	1.4
Malting	29	324,046	.7
Tobacco	782	1,414,660	2.9
Gloves	40	63,600	.1
Coffins	14	31,726	.1
Wagon stock	66	109,428	.2
Harness, etc.	11	30,932	.1
Brick	126	153,972	.3
Starch	58	261,174	.5
Buttons	137	81,515	.1
Boats	8	10,072	....
Miscellaneous	816	2,072,620	4.2
Total	16,819	$48,658,153	100.0
U. S. Census, 1900	28,061	98,467,921	....

GROUP 1.

Number of employes in non-urban manufactures as reported by Wisconsin factory inspection, 1901-2, for 15 counties, on the shores of Lake Michigan, Lake Superior and Green Bay' together with the estimated gross products of these manufactures.

Industries.	No. of employes.	Estimated gross value of products.	Per cent. of all industries.
Lumber, sawmill product	1,926	$4,915,456	40.6
Iron and steel	445	2,062,575	17.0
Foundry and machine shops	311	551,403	4.6
Sash, doors and planing mill products	182	349,258	2.9
Canning	605	300,980	2.5
Leather, tanned, etc.	100	381,500	3.1
Electrical apparatus	140	245,280	2.0
Woolens	112	186,701	1.5
Cement	180	248,400	2.0
Mineral water	94	294,972	2.4
R. R. shop products	68	95,200	.8
Woodenware	65	76,115	.6
Furniture	75	82,200	.7
Condensed milk, etc.	84	949,452	7.8
Brewing	51	253,317	2.1
Printing and publishing	34	49,096	.4
Stone	42	62,622	.5
Flour and feed	17	316,965	2.7
Bottling	12	42,000	.3
Cooperage	10	16,070	.1
Miscellaneous	256	649,984	5.4
Total	4,809	$12,129,549	100.0

GROUP 1-A.

Number of employes in non-urban manufactures as reported by Wisconsin factory inspection, 1901-2, for four counties in the Fox River Valley, together with the estimated gross value of products of these manufactures.

Industries.	No. of employes.	Estimated gross value of products	Per cent of all industries.
Paper and pulp	505	$1,297,345	60.2
Furniture	45	49,320	2.3
Sash, doors and planing mill products	43	82,517	3.8
Lime	51	70,380	3.3
Woodenware	25	29,275	1.3
Foundry and machine shops	26	46,098	2.1
Brewing	19	94,373	4.4
Canning	100	49,600	2.3
Flour and feed	17	316,965	14.7
Wagons, etc.	10	20,440	.9
Miscellaneous	4	101,560	4.7
Total	845	$2,157,873	100.0

GROUP 2.

Number of employes in non-urban manufactures as reported by Wisconsin factory inspection, 1901-2, for 10 counties in central southern Wisconsin, together with the estimated gross value of these manufactures.

Industries.	No. of employes reported	Estimated gross value of products.	Per cent. of all industries.
Agricultural implements	274	$656,778	24.0
Printing and publishing	78	112,632	4.1
Wagons	53	108,332	3.8
Malting	29	324,046	11.6
Foundry and machine shops	43	76,239	2.8
Tobacco	277	500,572	17.8
Gloves	40	63,600	2.3
Furniture	32	35,072	.1
Brewing	22	109,274	4.0
Creamery products	20	226,060	8.1
Sash, doors and planing mill products	17	32,623	1.2
Flour and feed	15	279,675	10.0
Tanning	16	61,040	2.2
Coffins, etc.	14	81,726	1.1
Miscellaneous	76	192,964	6.9
Total	1,006	$2,810,634	100.0

GROUP 3.

Number of employes in non-urban manufactures as reported by Wisconsin factory inspection, 1901-2, for seven counties in the upper Wisconsin River Valley, together with the estimated gross value of products of these manufactures.

Industries.	No. of employes reported.	Estimated gross value of products.	Per cent of all industries.
Lumber, sawmill products	816	$2,167,296	36.7
Paper and pulp	809	2,078,321	35.3
Tanning	185	705,775	12.9
Furniture	114	124,944	2.0
Wagon stock	66	109,428	1.8
Flour and feed	22	410,190	6.9
Wagons	23	47,012	.8
Foundry and machine shops	39	69,147	1.1
Printing and publishing	22	31,768	.5
Brewing	10	49,670	.8
Sash, doors and planing mill products	8	15,352	.2
Miscellaneous	25	63,475	1.0
Total	2,139	$5,872,378	100.0

GROUP 4.

Number of employes in non-urban manufactures as reported by Wisconsin factory inspection, 1901-2, for St. Croix county, together with the estimated gross value of products of these manufactures.

Industries.	No. of employes reported.	Estimated gross value of products.	Per cent. of all industries.
Flour and feed	52	$969,540	56.5
Lumber, sawmill products	90	241,040	14.1
Sash, doors and planing mill products	35	67,165	3.9
Cooperage	50	80,350	4.7
Creamery products	20	226,060	13.5
Wagons, etc.	16	32,704	1.9
Printing and publishing	14	20,216	1.2
Harness, etc.	4	11,248	.6
Machinery	3	5,319	.3
Miscellaneous	22	55,858	3.3
Total	306	$1,709,500	100.0

GROUP 6.

Number of employes in non-urban manufactures as reported by Wisconsin factory inspection, 1901-2, for three counties in the Chippewa River Valley, together with the estimated gross value of products of these manufactures.

Industries.	No of employes reported.	Estimated gross value of products.	Per cent. of all industries.
Lumber, sawmill products	1,066	$2,831,296	66.3
Leather, tanned, etc.	80	305,200	7.1
Brick	50	61,100	1.4
Stone	29	58,149	1.4
Paper and pulp	30	77,070	1.8
Flour and feed	22	410,190	9.6
Starch	25	112,525	2.6
Creamery products	28	316,484	7.4
Printing and publishing	22	31,768	.7
Furniture	10	10,960	.3
Sash, doors and planing mill products	9	17,271	.4
Brewing	5	24,835	.6
Machinery	5	8,865	.2
Wagons	5	10,220	.2
Total	1,398	$4,275,933	100.0

GROUP 7.

Number of employes in non-urban manufactures as reported by Wisconsin factory inspection for the state, exclusive of the counties in the preceding 6 groups, together with the estimated gross value of products of these manufactures.

Industries.	No. of employes reported.	Estimated gross value of products.	Per cent. of all industries.
Lumber, saw mill products	3,062	$8,182,672	41.5
Flour and feed	229	4,269,705	21.9
Cooperage	279	448,323	2.3
Sash, doors and planing mill products	244	468,236	2.4
Printing and publishing	161	232,484	1.2
Tobacco	505	914,088	4.6
Paper and pulp	178	457,282	2.3
Furniture	145	158,920	0.8
Monuments	133	287,014	1.5
Leather, tanned, etc.	125	476,875	1.9
Creamery products	123	1,390,269	7.1
Wagons and carriages	121	247,824	1.3
Buttons	187	81,515	0.4
Brick	76	92,872	0.5
Woolens	95	158,365	0.8
Brewing	78	387,426	2.0
Machinery	38	67,374	0.3
Starch	33	148,599	0.7
R. R. shops	30	42,030	0.2
Canning	50	24,800	0.1
Agricultural implements	10	23,970	0.1
Bottling	18	63,000	0.3
Harness, etc.	7	19,684	0.1
Boats	8	10,072	0.1
Miscellaneous	433	1,099,387	5.6
Total	6,818	$19,702,286	100.0

MANUFACTURING, WISCONSIN, 1904.*

Industries.	Capital.	Wage Earners.		Value of products, including custom work and repairing.
		Average number.	Total wages.	
Agricultural implements	$17,163,701	3,529	$1,796,994	$9,034,703
Boots and shoes, factory products	‡3,116,769	2,695	840,299	5,519,464
Carriages and wagons	9,027,589	3,462	1,681,350	7,359,877
Car, etc., R. R. shops	5,216,297	5,442	2,870,348	7,941,091
Cheese, butter and condensed milk	6,151,521	1,943	1,088,808	25,383,521
Clothing, men's, factory products	‡2,905,897	‡2,792	‡667,535	‡5,052,056
Flouring and grist mill products	9,534,565	1,269	684,433	†26,327,942
Foundry and machine shop products	27,756,083	15,743	7,932,486	27,766,906
Furniture, factory products	12,985,693	9,721	3,134,415	10,763,946
Iron and steel	†5,564,379	1,933	1,310,875	9,866,612
Leather, tanned, curried and finished	23,058,702	6,372	2,629,850	23,639,382
Liquors, malt	42,723,800	4,322	2,112,498	21,475,369
Lumber and timber products	66,636,104	13,861	8,986,837	56,302,165
Lumber, planing mill products	7,091,682	4,736	1,749,942	9,242,649
Malt	4,128,273	377	219,724	4,736,794
Paper and wood pulp	21,071,946	5,224	2,032,017	13,463,659
Printing, newspapers and periodicals	5,089,011	2,863	1,277,104	4,442,022
Slaughtering and meat packing, wholesale	4,389,950	1,610	649,822	15,684,073
Textiles	4,971,852	4,044	1,003,841	4,363,226
Tobacco	2,447,652	2,418	961,798	5,348,211
All other industries	84,816,908	57,175	21,006,090	111,649,341
Total	$365,848,374	151,531	$64,637,066	$405,663,408

*Estimated on basis of censuses of 1890 and 1900.

†Figures for 1900.

‡Estimate based on census, 1900, with rate of increase as shown by manufacturers' returns to bureau of labor and industrial statistics, Wis,

MANUFACTURING, WISCONSIN, 1890.

Industries.	Capital.	Wage Earners.		Value of products, including custom work and repairing.
		Average number.	Total wages.	
Agricultural implements	$10,611,185	2,765	$1,197,693	$5,015,512
Boots and shoes, factory products	2,621,606	2,036	774,163	2,972,233
Carriages and wagons	7,046,491	3,251	1,469,051	5,947,499
Cars, etc., R. R. shops	1,681,255	2,148	1,217,632	2,221,152
Cheese, butter and condensed milk	1,833,988	1,373	405,227	6,960,711
Clothing, men's, factory products	3,200,775	2,662	582,992	3,909,726
Flouring and grist mill products	9,804,761	1,770	799,058	24,252,297
Foundry and machine shop products	8,965,377	4,987	2,484,924	8,467,290
Furniture, factory products	3,270,421	2,909	1,101,542	3,616,517
Iron and steel	6,164,973	1,890	981,787	6,501,761
Leather, tanned, curried and finished	6,345,812	2,487	1,271,887	11,161,850
Liquors, malt	16,806,323	2,859	1,457,308	14,193,057
Lumber and timber products	105,191,521	41,306	10,712,947	60,966,444
Lumber, planing mill products	5,339,694	3,480	1,411,763	6,295,810
Malt	2,447,823	339	187,530	2,472,018
Paper and wood pulp	5,360,624	1,779	691,492	4,475,368
Printing, newspapers and periodicals	2,645,930	2,218	916,085	3,256,897
Slaughtering and meat packing, wholesale	2,269,880	737	338,273	8,393,754
Textiles	4,440,936	3,645	781,516	3,925,781
Tobacco	1,985,630	1,896	756,841	3,737,577
All other industries	38,483,399	33,470	13,418,556	59,802,910
Total	$246,515,404	120,006	$42,958,267	$248,546,164

CONCLUSION.

The most important factors in the manufacturing history in Wisconsin are raw materials and market facilities. Our one, almost all-important, souce of raw materials has been the hard and soft wood forests. The great problem of market facilities is transportation. In this, too, Wisconsin is most favored by Nature. The vast manufacturing possibilities and the traffic-yielding fertility of the soil have operated to give us a superb system of railroad accommodation to the best markets in the West. The great success of the manufacturing enterprises along their lines have helped to place these roads among the most profitable in the country.

The superior agricultural opportunities in some parts of our state, the timber supply in the rest, and excellent water powers and water and rail transportation facilities in nearly all of it, have constituted the chief physical conditions which have given rise to our rapid growth in manufacturing enterprises nearly everywhere over the state. While our manufactures are very generally distributed the distribution naturally varies with the potency of these advantages. Accordingly we find marked manufacturing districts in the state. In these districts we also find predominating those industries naturally attracted by the peculiar advantages of each district. More industries are powerfully influenced by the question of cheap transportation facilities than any other consideration. Therefore we find nearly 70 per cent of our manufactured product coming from counties on the shores of the Great Lakes or immediately tributary thereto. It would seem, moreover, that the potency of this influence is rather increasing than decreasing, for these counties show a growth in manufactures of 57 per cent during the past census decade as compared with an increase of 29 per cent for the rest of the state.

There are at least two important developments in the industrial history, which we are making here in Wisconsin, that are of a striking character. They are: first, the migration of our leading manufacturing industry, lumbering; and second, the supersedence of that industry by diversified manufactures. Investigation discloses a most startling loss in this industry in many localities, a loss not made up by the gain in others. Not only is our lumbering moving away from many of its old strongholds, notably our lower Mississippi towns, the Wolf river valley and the Fox river and Green Bay shores t [illegible] far north counties, but much is moving from localities farther north and not a little of this industry is leaving the state entirely. The extractive character of the industry of necessity must put a period to its existence in Wisconsin on any such large scale as formerly. The loss in this direction is however not without a gain. The industrial centers fostered by lumbering have become permanent. While the old industry has been moving out gradually, as its mission was fulfilled, in most instances new industries of a more permanent character have been put in its place and a substantial and permanent organization of industry attained.

It is therefore natural to expect that among all our industries the last census period marks a high degree of progress in the development of character and diversity in our manufacturing. Increase in size and number of many very important industries represented in many parts of the state makes strongly for future prosperity and solidity of manufacturing in Wisconsin.

Since the bulk of our manufacturing is found along the lake shores it is natural that most of our large manufacturing cities be found there also. The manufactures of Milwaukee are a third of the manufactures of Wisconsin. Its industries represent nearly every line in the state. Many of our other cities also have quite varied industries and nearly all show the same remarkable growth. While leading industries vary with localities, nearly all manufacturing centers have several industries well represented. While the statistics and estimates of manufacturies in cities of less than 20,000 population are in no way reliable in the way that a census is supposed to be, they do now, beyond a doubt, in many places a very surprising degree of diversity of manufactures and a very gratifying development of large enterprises and promising industries.

Repeated requests for estimates of various industries in Wisconsin at the present time makes it seem desirable to offer the following table. An effort has been made to estimate roughly the principal industrial factors in twenty of our leading manufacturing industries for 1904. These estimates are based on the rate of increase of the past census decade supplemented in one or two instances by additional data. For purposes of comparison in a general way an abstract is also given of the corresponding census returns for the census of 1890.

WORKMEN'S COMPENSATION FOR INDUSTRIAL ACCIDENTS.

WILLIAM PUNTON KERR.

CHAPTER I.

EMPLOYERS' LIABILITY IN ENGLAND AND THE UNITED STATES.

The past one hundred and fifty years has witnessed a progress in all lines of human activity and human interest entirely unprecedented in the history of the world. Never before has society felt the impetus of a power so great, so far-reaching, and so persistent as that which has sprung up since the birth of the so-called industrial era. Old landmarks have been swept away to be replaced by a civilization as different from the old as black is from white. Nor has this change been accomplished without a struggle; the ideas, the customs, and the traditions of the eighteenth and earlier centuries, which long usage had established firmly in the minds and actions of our fore-fathers of but a few generations ago, resisted zealously the conscious and unconscious efforts to supplant them. The nineteenth century was the battle ground of the old and the new, and it is to the victory of the new that we owe the civilization which is the pride of the modern man. But the battle is not yet over; the vanquished foeman is struggling to the last, and today we are confronted with many and serious problems, the solution of which is necessary to the acquirement of that social happiness and justice which is the goal of all civilizations. Nor is the multiplicity of the problems, to which the industrial era has given birth, in any way subordinate to their difficulty and intensity. The growing complicity of human life, and the ever increasing integration of society, with its accompanying inter dependence of man upon man, present to every thoughtful and intelligent person conditions with which it is extremely difficult to deal. Entire communities, entire states, and entire nations are so intimately connected and so closely inter-related, that no longer can the interests of individuals or of classes within the groups be considered without the closest regard for the mutual ties which bind them to the remaining individuals or classes. The "trust" problem is of importance not alone to the capitalist captains of industry; the injustice of monopoly, if there be any, casts its influence throughout the many grades of society from its greatest heights to its lowest depths. Consequently the greatest care must be exercised in dealing with any of the present industrial and social problems that all interests are given the greatest possible consideration and weight. But a progressive society must not only meet but must also solve the many problems which confront it, however many difficulties they may present, and its success or failure depends alone on the degree of justice which permeates its activities. In the following pages is presented to view a social and economic problem, which though it has not yet attracted the widespread attention and interest of the American people is none the less of the greatest importance.

The United States is surprisingly ignorant of the conditions fostered by this era of large scale industrial development in respect to the safety of life and limb accorded those who by their daily, weekly, and yearly exertions make this civilization what it is. That modern industrial methods are accompanied by grave and sometimes unavoidable dangers is known even to the most unreasoning mind; no person, who is at all acquainted with industry today or who peruses ever so seldom the modern disseminators of knowledge and intelligence, can be unaware of the fact that men are losing their hands, arms and legs, the use of their entire body, or their life itself while in the pursuit of their livelihood. But to the thoughtful man, who observes and is astonished at the industrial accidents which occur within the range of his visage, the question naturally occurs: What is the extent of the injuries inflicted upon labor throughout the vast expanse of industry? It is apparent to everyone that such a question can not be adequately answered save by the results of long continued and careful investigations, and by the compilation of complete statistics of accidents. In such investigations and in such compilations the United States is seriously, and it may be said negligently, lacking. Except in a very few branches of industry, absolutely no attempt has been made to record the occurrence of industrial accidents, either in respect to their number or to their intensity. A number of states have laws on their statute books compelling that notice be given the proper officials of all injuries and fatalties resulting from accident, but in most states these laws are entirely disregarded or successfully evaded. In a field long since entered and occupied by practically all Europeon nations the United States has made as yet almost no advance, except in the one or two industries recognized the world over as most dangerous to life and limb.

The dangers attached to railroad occupations are apparent to all who are acquainted with the nature of the modern system of rapid and long distance transportation, and early in the history of American railways different state legislatures endeavored to minimize them by the enforcement of strict preventive regulations. In 1887, Congress vested in the Inter-State Commerce Commission the supervision of all transportation lines engaged in inter-state traffic. The work of this commission in the collection of statistics and in its demands for strict preventive measures has become an invaluable aid to the welfare of the many thousands engaged in the maintenance and operation of railroads. Its work represents, also, practically the only systematic effort to obtain statistical evidence of the physical and mortal injuries inflicted by accidents upon any class of workingmen in the United States. The following tables compiled from the published statistics of the Inter-State

Commerce Commision illustrate clearly the extent to which railway labor is liable to injury and death.[1] The division of the entire number of employes into three classes is the one commonly used in relation to the working forces of a railroad, though in its last three reports it has been dropped by the commission. Under the heading "Other Eployes" are included not only such as are employed in or about the actual means of transportation but all office forces as well.

TABLE I.—TOTAL RAILWAY EMPLOYES AND NUMBER KILLED AND INJURED IN THE UNITED STATES—YEARS ENDING JUNE 30, 1889, TO 1902.

Year ending June 30.	Total railway employes	Employes Killed or Injured.							
		Trainmen.		Switchmen, Flagmen and Watchmen.		Other Employes.		Total.	
		Killed.	Injured.	Killed.	Injured.	Killed,	Injured.	Killed.	Injured.
1889	704,743	1,179	11,501	229	2,155	564	6,512	1,972	20,028
1890	749,301	1,459	18,172	234	2,307	758	6,917	2,541	22,396
1891	784,285	1,553	15,421	301	3,019	826	7,700	2,680	26,140
1892	821,415	1,503	16,521	294	3,254	767	8,492	2,559	28,267
1893	873,602	1,567	18,877	307	3,304	857	9,548	2,727	31,729
1894	779,608	1,029	13,102	216	3,221	578	7,999	1,823	23,422
1895	785,034	1,017	14,748	248	2,933	546	8,015	1,811	25,696
1896	826,620	1,073	15,936	210	2,751	578	11,282	1,861	29,969
1897	823,476	976	13,995	201	2,423	516	11,442	1,693	27,637
1898	874,558	1,141	15,645	242	2,177	575	13,939	1,958	31,761
1899	928,924	1,155	16,663	278	2,992	782	15,268	2,210	34,923
1900	1,017,623	1,396	17,571	272	3,060	889	19,012	2,550	39,643
1901	1,071,169	1,537	16,715	175	1,190	963	23,237	2,675	41.142
1902	1,189,315	1,674	21,503	200	1,143	1,095	27,878	2,969	50,524

This table serves well to show the magnitude of the problem of accident prevention. The following table is more valuable for purposes of comparison not only with conditions on railways in other countries but also with conditions in other industries.

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[1] See W. F. Willoughby in Bulletin of the Department of Labor, No. 8, p. 8, from whom the arrangement of the tables is borrowed.

TABLE II.—NUMBER OF EMPLOYES FOR EACH ONE KILLED OR INJURED BY RAILWAY ACCIDENTS IN THE UNITED STATES—YEARS ENDING JUNE 30, 1899, TO 1902.

Year ending June 30.	Trainmen.		Switchmen, Flagmen, and Watchmen		Other Employes.		All Employes.	
	Killed,	Injured.	Killed	Injured.	Killed.	Injured.	Killed	Injured.
1889	117	12	144	15	946	81	557	35
1890	105	12	161	16	737	81	306	33
1891	104	10	134	13	707	76	295	30
1892	113	10	146	14	805	72	322	29
1893	115	10	150	19	960	68	320	28
1894	156	12	200	15	997	72	420	33
1895	155	11	174	16	1,070	73	433	31
1896	152	10	211	18	1,072	55	444	28
1897	165	12	218	18	1,198	54	486	30
1898	150	11	195	18	1,142	49	447	28
1899	155	11	178	16	897	46	420	27
1900	137	11	183	16	872	40	399	26
1901	136	13	260	38	848	35	400	26
1902	135	10	252	44	832	32	401	24

It is easily seen from the figures here given to what an extent danger of death and injury from accidental causes confronts the employes of our great transportation systems. Of one million and more employed on railways in the United States in 1902, one out of every four hundred and one received injuries which resulted in his death, while out of every twenty-four one was more or less seriously hurt. And railroad labor, as a class, is of the highest skill and intelligence. But these figures are not sufficient to portray the suffering and hardships which those who are deprived of the earnings of the injured and killed are obliged to endure. Such a loss, while it can not be represented adequately in dollars and cents, nevertheless exists, and is not to be disregarded in the consideration of such a problem as that of the prevention of and compensation for accidents. If it were known, the actual or average number of days' employment lost by each workman as a result of his injuries, it would be possible to compute with approximate exactitude the actual financial loss occasioned to railway labor by causes over which it can exercise but little control. Unfortunately, however, such detailed statistics are lacking, though it is easy to imagine what results they might afford were they attainable.

Agitation for reform in the methods of the coal-mining industry has led to a systematic study in some states of the accident risks involved in the ordinary employment of coal miners. Laws requiring that the state mine inspector be notified of all accidents within a limited time of their occurrence are generally disregarded, and as little effort has been expended in their enforcement the resulting data are very meager as far as the entire coal industry of the country is concerned. Pennsylvania, Ohio and Illinois, the three largest coal producing states of the Union, have detailed information covering a long period of years that is extremely interesting and may be taken as an evidence of conditions throughout the industry. The following table is compiled from the twenty-third annual coal report of the Illinois Bureau of Labor Statistics, for the year 1903.

FATAL AND NON-FATAL ACCIDENTS IN COAL MINING INDUSTRY OF ILLINOIS, 1894-1903.

Year.	Total No. of employes.	Total tons coal mined.	Total number.		No. of employes to each		Rate per 1,000.		No. Tons Coal Mined to Each Employe	
			Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.
1894	32,635	17,113,576	72	521	453	63	2.2	16.0	237,688	32,848
1895	31,962	17,735,864	75	605	426	53	2.3	18.9	236.478	29,315
1896	33,054	19,786,626	77	672	429	49	2.3	20.3	256.969	29,441
1897	33,788	20,072,758	69	518	489	65	2.0	15.3	290,610	38,751
1898	35,026	18,599,299	75	438	467	80	2.1	12.5	247,991	42,461
1899	36,991	23,434,445	84	597	440	62	2.3	16.1	278,982	39,254
1900	39,384	25,153,929	94	611	419	65	2.4	15.5	267,595	41,168
1901	44,143	26,635,319	99	422	445	104	2.2	9.6	269.044	63,117
1902	46,005	30,021,300	99	406	464	127	2.2	8.8	303.245	73,944
1903	49,814	34,955,400	156	410	319	121	3.1	8.2	224.073	85,257
Av. for 10 years ..	38,280	23,350,851	90.0	520	424.2	90.2	2.8	11.0	259,455	44,405

It is the comparative rather than the absolute figures which are significant in this case as in the last. In the first place, it it to be noticed particularly that the relative number of non-fatal accidents has tended to decrease materially during the decade observed, while of the fatal, with the exception of the last year the relative number has more closely approximated uniformity. This condition is due to the fact that accidents that result fatally to miners are in the majority of cases practically beyond the province of human prudence and foresight to prevent, while the non-fatal accidents are caused primarily by carelessness and the lack of suitable precautions. In the marked decrease in the relative number of the latter class of accidents the work of the state mine inspectors is clearly evident, as well as that of labor unions, which by doing away with the task, or rushing, system, have made possible the exercise of greater care by all miners.

Again, it is well to dwell a little more at length on the meanings of the figures, in regard to the actual loss occasioned to those sustaining accidental injuries. In 1903, one out of every 319 coal miners in the state of Illinois lost his life, and one out of every 121 sustained injuries of a less severe nature. What was the resulting effect upon the communities which claimed as members the unfortunate victims? The following table affords an answer to this question in as concise a form as it may be given.

CONJUGAL RELATIONS OF THE KILLED AND INJURED IN THE COAL MINING INDUSTRY OF ILLINOIS, 1903, AND TIME LOST BY INJURED.[1]

	Killed.		Injured.	
Conjugal state, total		156		410
Married	97		221	
Single	59		189	
Dependents, total		706		1,428
Widows	93		221	
Children	280		499	
Others	342		708	
Number recovered and losing time				358
Total days' labor lost			20,746	
Average per man			58.0	

From the foregoing it is evident that industrial accidents are of vastly more far-reaching consequence than is commonly and at first sight supposed. Every accident in which one man received injuries brought on the average hardship upon more than three other persons, in no wise responsible for the accident. The extent of their suffering cannot be accurately depicted in general terms, though it readily lends itself to the powers of the imagination. Fifty-eight days' pay were lost on the average by the 358 injured men who recovered, representing at a reasonable estimate $116.00, aside from the permanent decrease in earning capacity which may have been occasioned.

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[1] Illinois Coal Report, 1903, pp. 72–80.

No statistics have ever been collected showing the number or rate of accidents in the factories and workshops of the United States. The New York Bureau of Labor Statistics during the three months ending June 30, 1899, conducted an investigation of industrial accidents in New York, which though incomplete as an indication of conditions in industry as a whole, serves to exhibit to some extent the severity of modern industry. The cases covered by the following table are from 452,425 employes, or less than one-half of the entire number of employes in mechanical pursuits in the entire state.

RATIO OF INJURIES TO PERSONS EMPLOYED.[1]

Industries	Number of injuries in three months.	Proportionate number in one year.	Number employed.	Number injured to each 1,000 employed.
1. Stove and clay products	75	300	19,764	15.18
2. Metals, machinery, apparatus	820	3,280	123,467	26.57
3. Wood	145	580	31,482	18.42
4 Leather, rubber, pearl, etc.	25	100	31,169	3.21
5. Chemicals, oils, explosives	145	780	31,164	44.06
6. Pulp, paper and cardboard	85	340	8,201	41.45
7. Printing and allied trades	88	342	38,293	9.19
8. Textiles	133	532	59,709	8.91
9. Clothing, millinering, laundering	22	88	65,220	1.35
10. Wood, tobacco, liquors	154	606	45,600	13.51
11. Public utilities	69	276	7,403	37.28
12. Building industry	61	244	9,313	26.20
Totals	1,822	7,288	452,425	16.11

Formidable as these figures appear, they can by no means be taken as typical. The small number of establishments reporting and the short duration of the investigation forbid this. Compared with similar European statistics the average number of injured per 1,000 is extremely low, and in the absence of conflicting proof it cannot but be believed that the results of this investigation under, rather than over, state the true facts of the case. It is sufficient for present purposes, however, that of a total of 452,425 employes in a variety of industries 1,822 were reported the victims of accidents in the short space of three months. The investigation continued to learn that the average amount of time lost by the injured was 15 days; in all, 19,587 days of work were lost.

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[1] Seventeenth Annual Report of the New York Bureau of Labor Statistics, 1899.

No distinct attempt has been made to collect similar figures for the building trades and for agricultural pursuits. Suffice it to say, however, that dangers exist today in every line of occupation to a greater extent than ever. One has but to glance through the pages of a large newspaper to learn of the destruction of life and limb that is constantly being enacted about him. The United States loses more men annually on her railroads than she lost from all causes in the Spanish American War.

The man who depends upon his daily wage for the support of himself and his family has his only source of income stopped by an accident which leaves him, perhaps, only temporarily disabled. The result is temporary privation, and often starvation, for his family, unless charity intervenes. Should his disability be permanent, or should death result, the matter is only so much the worse. Further, the social effect of an industrial system which maims and destroys the natural provider of sustenance for a family is to throw into the ranks of labor at an immature age the many dependents of the unfortunate victim.

It has become the effort of all state and national authorities in the industrial world to minimize the risks of accident and the economic loss resulting from their occurrence by compelling the safe-guarding of dangerous machinery and by systematically enforcing better conditions of employment. "Nowhere has the modern state assumed that its help is not needed by the working people in dealing with the problem of accidents." [1] An evidence of this tendency on the part of every civilized state to protect its citizens is found in the numerous factory acts which abound on all sides. The results of these preventive measures have been very gratifying, though they have failed to accomplish all the good expected of them. In spite of the many safety devices constantly employed in and about machinery, on the railroads, and in all dangerous trades, the increase in the number of accidents seems to keep pace with the growth of industry, though many grave dangers have been for the most part overcome. In some European countries[1] the prevention of accidents has become almost a science, for the furtherance of which vast sums of money are annually expended.

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[1] See Report of Industrial Commission, Vol. VII, p. 215 seq., for comprehensive statement of the existing problem.

But the effort to prevent accidents is not alone sufficient to relieve the situation. Along with the increase in the number of accidents and the corresponding efforts at prevention has arisen a problem, which, though not of primary importance as far as the two are concerned, is nevertheless demanding the attention of thoughtful economists and students of social problems. In an age when one out of every few score of men receives bodily injuries due to accident met with in the course of his ordinary employment, the question naturally arises as to whether industry is worth while, and if so, who is going to stand the expense incurred by the steady loss of life and limb. The problem of compensation for industrial accidents is an important one from both the social and the economic point of view, though it must at all times be considered as subordinate to the larger problem of accident prevention.

In its historical treatment, the problem of workmen's compensation for industrial accidents is best considered from two standpoints. The first is that of the common, or judge-made, law, which in the rules defining the liability of employers to injured employes has up to the last generation governed practically all legislative and private action. The second is that which disregards entirely the question of negligence involved, and judges that compensation for all accidents met with in the course of employment is due injured workmen. Whichever point of view one chooses to take he is immediately confronted with numerous difficulties, which require removal before satisfaction is complete. Both have their zealous adherents, and especially by Americans must both be most carefully considered. As the one is essentially the outgrowth of the inability of the other to afford an equitable foundation for relief, I shall consider them in their natural order and shall turn now to a review of the history and present status of employers' liability in the United States and England.

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[1] Germany in particular. See chap. III, below.

Under the common law of employers' liability, a master has always borne a certain responsibility to his servants for accidents met with by them during the ordinary course of their employment. Hence the source of the present law in this country must be sought in the common law and the precedents established by English and American courts.[1] The common law is the law as laid down by the decisions, not governed by statute, of the courts of last appeal in this country and in England. The growth of the principles which govern the common law rules has been, therefore, in the minds of the many judges upon whom the duty has devolved of settling cases of dispute; no strong and central shaping hand is felt in the creation of these principles of justice and equity. Accordingly the law of employers' liability has been invested with a maze of subtleties and devices which to the lay mind is actually bewildering, and which has given rise to a distinct class of lawyers, who make a specialty of cases in which is involved personal injury due to negligence.

The cardinal principles of the common law of employers' liability are in reality simple and easy to understand. These are ably summed up in and deducible from the two maxims, at once perfectly intelligible and common to all branches of law: (1) A person is liable to all others for his acts, or omissions to act, and for his own breaches of contract; (2) A principal is liable to a third person for the wrong doing of a subordinate in his employ. The rule *Respondeat Superior*—let the master answer—holds a master responsible for the acts of his servants while in the performance of their duties and under his orders. Unless he be a child, in the eyes of the law every person is accountable for his own actions, and is liable for any personal and pecuniary loss which another may sustain thereby. By accepting the protection which society affords him in the prosecution of his own interests, an employer assumes certain responsibilities in respect as well to his servants as to the general public, and enters into an implied contract with both.

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[1] **See Report of Industrial Commission, Vol. VIII, p. 815.**

But in relation to his servants a further duty rests upon a master, based on the implied or expressed contract of employment. In return for the services of the employe the employer stipulates certain conditions under which the employment shall be pursued. The master guarantees the ways and means of his establishment to be in *reasonably* good condition. He agrees[1] to furnish *reasonably* safe and suitable places in which to work, a sufficiency of tools and appliances and *reasonably* safe machinery to do the work required; to keep and maintain his works, machinery and plant in the same safe condition; to provide competent workmen; and to instruct and warn the servant of any hidden defects, dangers, etc., which the latter may not be supposed to know. In short, the employer agrees to use all *reasonable* care to protect his servant from injury. In no case does he agree to furnish the latest and most perfect appliances, nor to employ only the most skilled and most competent workmen. He merely agrees to use that care in the choice and selection of men and tools and in the maintenance of his establishment as to a *reasonably* careful and prudent man would seem sufficient. These duties, moreover, are personal to the employer, and in no case can he escape liability for breach of such contract by delegating them to another. And the employe, on the other hand, is required to exercise in his employment that degree of care, prudence, and caution which a reasonably cautious man would assume.

Upon first thought it may seem that the duties of the employer and of the employe as above defined are thoroughly just and satisfactory to all concerned. But a brief consideration will serve to point out the uncertainties with which a just interpretation of these rules in individual cases must contend. The question naturally arises: Has, or has not, the individual been guilty of a breach of contract? "The authorities are all agreed that the degree (of caution) required to be exercised is that of ordinary care; yet as to what measure of diligence will constitute ordinary care in relation to particular facts and circumstances and what comparisons or tests may be, or ought to be, applied as a basis for determining whether the act or omission was the exercise of such degree of care, there is an apparent conflict."[1] "Ordinary care" and "reasonable prudence" are not terms which admit of close and arbitrary definition; their significance is relative rather than absolute. The question to be decided is, what, under the same circumstances, would the majority of men of common intelligence in the exercise of reasonable prudence have done. And on account of the difficulty of determining this fact, uncertainties occur, which as will later appear operate to the harm of both master and servant.

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[1] See Dresser, F. F.: "The Employers' Liability Acts and the Assumption of Risks," p. 6.

I have spoken thus far only of the general duties which the contract of employment impose upon master and servant; it is necessary now to consider the specific principles which determine the liability of an employer to his injured employe. First among these, and resting entirely upon the contractual relationship of the two parties, is the doctrine of assumption of risk, or acquiescence, described in the phrase *Volenti non fit injuria*—whoever willingly incurs danger deserves no reward for injuries sustained thereby. The servant in accepting employment is supposed to be aware of the dangers connected therewith, and by the mere act of entering into his duties agrees to assume all its risks. Likewise, the servant is able at any time during the course of his employment to discern any unusual or unexpected dangers of his work and is at perfect liberty to discontinue his employment; if he remains after such discovery he tacitly agrees to assume the extra hazards, unless he has been assured that remedies will be instituted to do away with the same. If he be willing to risk his personal well-being, he must be content to stand by the consequences of his willingness. The employer is at liberty to conduct his business in his own way, provided only that he keeps within the bounds of reasonable care and prudence, even though his methods be more than ordinarily hazardous. Knowledge of actual conditions is presumed, however, on the part of the employee, and the employer may rest upon the assumption that the former does know what is generally to be seen.

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[1] Bailey, W. F.: "The Law of the Master's Liability for Injuries to His Servant," p. 4.

Two questions arise preeminently in regard to the doctrine of acquiescence, the one concerning its justice on abstract principles, and the other concerning its practical operation. The first I shall not discuss at this point; the second needs but a word in reply. The risks and dangers of modern industrial operations are many, some of which are of a nature to be readily foreseen, others of a character defying the ingenuity of man as well to discern in advance as to prevent. What, then, are the exact and precise risks which in a particular instance a servant assumes? No definite rule can be laid down to cover uncertainties occasioned by this question, and until authoritative opinion has been obtained, doubt must always exist as to the assumption of the particular risk involved in any matter of dispute.

It is perfetly obvious that no man is deserving of the assistance of his fellow men, who wantonly and maliciously damages himself. And the modification of this belief embodied in the judge-made doctrine of contributory negligence constitutes for a master in cases involving his liability to his injured servant a defense to be broken only with the greatest difficulty. Be the breach or omission of the former what it may, if he has in any measure, however slight, contributed to the causes of his injuries, the latter is without legal basis for compensation. The employer may be guilty of the grossest negligence, but if the employe be ever so slightly remiss in his actions, recovery is denied him. Some states of the Union have endeavored to modify the rigor of this rule by the substitution of the doctrine of comparative negligence, which considers the relative degree of departure from the standard of ordinary or reasonable care and prudence. Thus a slight degree of negligence on the part of the servant would be counteracted and nullified by the gross negligence of the master. Illinois[1] has recently discovered the fallacy of this rule, which through its indeterminateness but adds to the uncertainties incident to the principle which it seeks to substitute. The difficulties involved in determining in any particular instance not only the degree of negligence concurring to cause an accident but even the presence of contributory negligence is readily apparent. It is manifestly impossible to formulate any rule which shall apply in all or in a majority of cases; every emergency must be met with a special opinion based entirely an the facts of the one instance.

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[1] Cicero & Proviso St. Ry. Co. v. Frank Meixner, 160 Ill., 320. The doctrine of comparative negligence is no longer the law in Illinois.

The doctrines of contributory negligence and assumption of risk are separated by a clearly defined distinction. Whereas the former depends entirely upon conduct pursued after employment has been entered, the latter is based upon the contract which commences that service. It is through a corollary of the latter that the greatest source of uncertainty in, and dissatisfaction with, the common law has arisen. The greatest defense open to masters against liability for injuries received by their servants is found in this doctrine of fellow-servants, or co-employes. So important is this doctrine in the common law of employers' liability and such a mass of disputes, decisions, and legislation has it given rise to, that it is worth while to investigate somewhat more closely its formulation.

English and American courts enunciated the doctrine of common employment independently of each other and at about the same time. The earliest American decision is that of a South Carolina court, but the foremost one is that in the case of Farwell vs. Boston and Worcester Railroad Company.[1] The leading English case is that of Priestly vs. Fowler, decided in 1837. Priestly was employed by a butcher named Fowler to deliver goods. Upon the occasion in question the delivery wagon was heavily overloaded and broke down, thus inflicting severe injuries on Priestly. Judge Abington in deciding the suit brought by the injured man for recovery gave utterance to the now famous doctrine of fellow servants, declaring that a master is not liable to one servant for injuries sustained through the negligent act of another, or fellow servant. The decision held, in substance, that it is not just to make one man responsible for negligent acts over which he has no direct and personal control, and that what risk, if any, was involved in the co-laboring of a number of men must be assumed and borne by those most intimately acquainted with conditions and most liable to be affected. It was held that a rule which made a master responsible to his servant for the negligence of his carriage-maker; for the cold contracted by an employe on account of damp sheets placed upon his bed by another employe—that such a rule, involving as it was intended to the most intimate relations of a servant with his fellow servants and his master, was unjust to the latter, and one which, if strictly applied, would render impossible the further relation of master and servant in large industries.

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[1] Decided by Chief Justice Shaw, of Massachusetts, in 1842. (4 Met., 49.)

The effect of this principle is to abrogate the common law doctrine of *respondeat superior* in the case when the person sustaining the loss is also a servant in the employ of the same master. A distinction is thus created between those who are servants of a particular master and those outside of his employment, by which the former are at an extreme disadvantage. A perfect stranger is entitled to recover from the employer for damages sustained through the negligent act of an employe; not so another servant. Some justification there is for this doctrine under certain conditions. It implies the assumption of a class of risks which are due to the acts or omissions of fellow employes, whose interests are mutual and whose relations are friendly. Fellow workmen in a small establishment, where each man is personally and often intimately asquainted with the others, have these common interests, which insure the maximum care on the part of each in such operations as are likely to prove dangerous. The personal element in the relations of each servant with his fellow and with his master is sufficient guarantee of more than reasonable precautions. But modern industry is otherwise organized; today thousands of men are continually working for a common employer, and a system of minute division of labor has divided them into numerous departments. It is not, then, folly to assume that an engineer in a shoe factory is so intimately connected with a distantly located stitcher as to insure the greatest care on his part that through no act of his the stitcher may be injured? Nor does this community of interest any longer exist between men employed in the same departments. The switchman on a railroad may never have seen the engineer whose safety depends on his proper actions; still the engineer may not complain if the negligence of the switchman results in his injury. His relations with the switchman may be no closer than those with the passenger on his train, who received injuries at the same time as himself, but who not only is entitled to recover damages from the railroad company but is not permitted by law to relieve the company from responsibility for his safety.

No more difficult problem has arisen, in connection with the common law of employers' liability than that of determining who are and who are not fellow-servants. Different courts have promulgated different definitions; different statutes have attempted satisfactory statements: none of these has had the effect, other than in a general way, of settling the ever-recurring dispute. A common device is to exclude from the category of fellow-servants employes in different distinct departments; another classification of the widest adpotion excludes those delegated with particular authority, or those to whose orders the injured man was subject at the time of his injury. Both distinctions serve, however, to increase the uncertainty of the general question, the one by making necessary the defining of distinct departments, the other by opening a new discussion as to who are vice-principals. The federal courts hold that specific delegation of authority in particular cases and management of distinct departments is necessary to determine vice-principals, but the federal courts have not laid down any rule as to what shall constitute specific delegation and distinct departments.

In England, the application of the principles of employers' liability led to a great amount of discontent and dissatisfaction. On account of the difficulty met with in fixing the blame for accidents, an uncertainty arose, which, coupled with the extreme expenses of all legal procedure, drove all but the most clear and worthy claims away from the courts. In a simple agricultural community, or under the old system of domestic economy, the attachment of blame was an easy matter and the fellowship which naturally existed between the master and his few employes was sufficient to guarantee the utmost of care on the part of each in his relations with the others. Nor was the inherent risk of industry of so grave a nature as under the present system of complicated and extended machine production. But as the factory system grew, it was found more and more that accidents occurred which could be traced to the negligence neither of the employer, of the employe, nor of any one person. A class of accidents arose which in the true sense of the word were accidents—happenings absolutely unaccountable as far as human influence or explicable circumstances were concerned. A German investigation,[1] in 1887, of 15,970 accidents shows this clearly. Of the total number of accidents there were due to the

	Per cent.
Fault of employer	19.76
Fault of third person, particularly to employer	3.28
Fault of injured persons	25.64
No fault which can be assigned	3.47
Fault of both	4.45
Inevitable risk when at work	43.40
	100.00

It is evident that of the accidents here investigated only 20% were deserving of compensation under the doctrine of common employment, and even that many only when full legal proof was obtainable. Of the remainder, over 50% were caused neither by the employer nor by the employe, cases in which the law allows absolutely no reparation.

As the unfairness of the law became more and more impressed upon the people agitation for reform began, which led to the passage in 1880 of the Employers' Liability Act. In as much as the burden of dissatisfaction with the common law had been borne by the doctrine of common employment, it was the purpose of this act to abolish entirely the obnoxious principle. The act was looked upon by labor sympathizers as a great legislative victory, while by employers it was thought that a death blow had been inflicted upon all industries which it affected. In its application, the new law extended to all types of service with the exception of seamen, sea apprentices and menial or domestic servants. Subject to certain limitations, the law declared that every man injured in the course of his employment, or his representatives after death, was entitled to compensation from his employer. The liability of the employer was extended to five special cases in which workmen may receive personal injury:[1] "(1) by reason of any defect in the condition of the ways, works, machinery, or plant connected with or used in the business of the employer; (2) by reason of the negligence of any person in the service of the employer, who has any superintendence entrusted to him, whilst in the exercise of such superintendence; (3) by reason of the negligence of any person in the service of the employer to whose orders or directions the workman at the time of the injury was bound to conform, where such injury resulted from having so conformed; (4) by reason of the act or omission of any person in the service of the employer done or made in obedience to particular instructions given by any person delegated with the authority of the employer in that behalf; (5) by reason of the negligence of any person in the service of the employer who has charge or control of any signal, points, locomotive engine, or train upon a railway."

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[1] Industrial Commission, Vol. VII, p. 816.

The relief afforded by this law was more fancied than real, as subsequent developments proved. In the first place, though the range of liability of the employer was extended a little, the burden of proof was left upon the plaintiff with no diminishment of the expenses and uncertainties of litigation. In the second place by extending the liability of the master to cover the acts of his superintendent, or vice-principal as he is often called, the law introduced another item of uncertainty. To the already open and ever changing question as to who were co-employes the question as to who were vice-principals was now added. "It" (speaking of the act)[2] "has only very partially, more by apprehensions aroused, which may subside, than by direct efforts likely to endure, reduced the number of accidents, only very partially, irregularly and insufficiently provided compensation for injured workmen."

The need of employers' liability legislation began to be felt in the United States with the introduction and expansion of railroad transportation, and succeeding years have added many and various statutes relating to the subject to our laws. Georgia was the first state to enact legislation bearing on the liability of employers for injuries sustained by their employes in the course of their employment. Sections 2297 and 2323 of the revised code of Georgia, enacted in 1856, are interesting not only as the earliest but also in many respects as the most advanced piece of legislation ever passed in this country, doing away as they do entirely with the doctrine of common employment and with that of contributory negligence, when the act contributed to is of the employer. This applies only, however, to railroad companies and their employes.

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[1] Willoughby: Workingmen's Insurance, p. 269.

[2] Wolff, Employers' Liability, p. 58.

Legislation in the United States has pursued the following general lines: (1) Statutes declaratory of the common law doctrine, defining the duty of the master, and stating the rules of the contributory negligence and common employment doctrines; (2) Statutes modifying the doctrine of common employment by defining and limiting the relation of fellow-servants; (3) Statutes removing entirely the defense of common employment and making the employer liable for the acts of his one servant to his other servants as to the public, thus establishing again the rule of *Respondeat superior;* (4) Statutes declaring the liability of employer for accidents resulting from their failure to comply with preventive regulations; (5) Statutes extending the right of action to the legal representatives of injured employes after death; (6) Statutes regulating the use and proper conduct of insurance and mutual relief funds, mainly designed to nullify contracts entered into between employers and employes for the protection of the former against civil process; (7) Statutes relating to the notification by employers of the proper state officials of the occurrence of accidents.[1]

No uniformity between the actions of various states has been attempted or obtained. The legislation of particular states has been influenced to a greater or less degree by the industrial conditions prevalent therein, though some of the distinctly agricultural states have taken action on the subject. Alabama, Colorado, Indiana, Massachusetts and New York enacted laws based entirely on the English act of 1880. Many laws apply only to particular industries, as especially to railroading and mining on account of their dangerous nature. Maryland, in 1902, made a wide departure from the established custom by compelling the insurance of employes in some of the more dangerous pursuits with the state commissioner of insurance, one-half of the amount of premiums to be deducted from wages at the discretion of the employer. The constitutionality of this law has not yet been finally passed upon, and it is open to question as to the attitude the higher courts take to it. Porto Rico, in a recently enacted law designates the maximum of compensation in case of injury as $2,000, and in case of death, $3,000. The attempt is made to simplify procedure and remove many of the existing uncertainties.

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[1] See short article by G. A. Weber in Bulletin of the Bureau of Labor No. 54, page 1469 seq. For text of Employers' Liability Laws of the United States see Appendix A.

As a result of the Employers' Liability Act of 1880 a practice grew up among employers of compelling as a necessary condition of employment the signing of a contract relieving the employer from his liability in case of accident. It was often made to appear of advantage to employes to do this, but in many cases the only reward for the waiving of legal rights was the employment. The practice has had no small growth in this country, where it is found in connection with collective insurance and mutual schemes contributed to and managed by employers. The injustice of such contracts is readily apparent and they are no longer held valid by the courts. The Supreme Court of the United States has thus expressed itself on the question of contracting out: "As a general proposition, it is unquestionably true that an employer can not relieve himself from responsibility to an employe for an injury resulting from his own negligence by any contract entered into for that purpose before the happening of the injury." It is evident that continued pursuance of this custom would controvert the ends of justice to the detriment of the public welfare, and that it is for this reason contrary to public policy. The British Workmen's Compensation Act forbids contracting out, except in such special cases as meet with the approval of the Registrar of Friendly Societies.

CHAPTER II.

THE OPERATION OF EMPLOYERS' LIABILITY LAWS.

In the last chapter it was discovered that a system of compensation based on negligence is unsatisfactory, first, because of the impossibility of ascribing every accident to the negligence of any certain person or persons; it was found that of the total number of accidents in a variety of industries upwards of 50% are caused by no ascertainable act or omission, but are due to the nature of the employment. Under a system of employers' liability no relief is afforded in the case of such accidents. But as regards the remainder of the accidents: Are the rules regulating the liability of employers sufficiently definite to admit of no uncertainty and to guarantee an injured man just compensation when he clearly deserves it? There can be no doubt that there exists a second cause for the dissatisfaction both of employers and of employes in a system such as prevails today in the United States. The extremes to which has been carried the division of labor, and the employment of large numbers of men in individual enterprises have made the matter of *proving* negligence a most difficult task in every case. The uncertainty thus created acts with different effects on the parties interested; to the employer the measure of risk in his business is raised above the normal by the probability of incurring heavy liability; to the employe is raised a barrier to recovery, formed by the uncertainties and heavy expenses of legal procedure. In any one year, the employer is unable to foretell the number of accident suits which he will be forced to defend; much less can he determine in advance the amount of liability which adverse decisions of the courts and hostile juries may impose upon him. The average employe is totally without funds to instigate legal proceedings against his employer, even though his cause be most worthy, and the uncertainty of decision renders him extremely loath to venture in such a case what accumulations he may possess. Both parties, then, suffer from the workings of a system of compensation based on the civil liability of the employer to his servants, and in consequence schemes have been evolved and put into operation which propose for the one to remove the risk of liability, and for the other to substitute a certain means of compensation for the indefinite system to which it now looks for relief. Reliability, stability, and uniformity are the conditions desired by master and servant alike. This chapter proposes to notice the efforts expended to release employers from their liabilities and from the payment of compensation; it then turns to some of the counter-influences brought to bear in behalf of labor.

With the large increase in the number of personal accidents there has developed a class of men who, claiming the dignity of the legal profession, are recognized neither by the profession nor by the general public as pursuing a legitimate occupation. These gentlemen from the manner in which they obtain their business and from their unprofessional methods are called by their more respectable legal brethren, "Ambulance Chasers." It is their business to follow up a man injured in any sort of accident and secure his case on contingent fees. Watching the daily papers and having other means of securing information in regard to accidents, they lose no time in gaining an audience with injured men. The work of the ambulance chaser is entirely unprofessional. He has no interest in the injured man beyond the fee he may receive from him. Knowing nothing of the case, he leaves in the hands of the injured the difficult matter of obtaining evidence and testimony, and if he is unable to do this the case is dropped. Having no resources the lawyer is unable to carry a case beyond the lower courts, and seldom cares to, though he be in a condition so to do. The ambulance chaser is, as it were, a human bird of prey, who swoops down on the innocent victims of accidents and makes his sustenance from their helplessness. Knowing little of the law they care not whether their clients deserve indemnification or not. A worthless claim pushed to trial is an expense to the defendant and a bother which it is often worth quite a little money to avoid.

Settlements are sought before or after trial and on any foundation which will yield some financial gain; needless to say, the needy and suffering injured man sees but a small portion of the amount thus recovered. As a result of such conditions workingmen in their ignorance of the law and of legal methods are deprived in great measure of what opportunities they have under the law of recovering damages, employers are forced to undergo a constant menace and harassment bordering on blackmail, and the general public is inconvenienced by the overcrowding of court calendars with personal injury suits, which delays the process of all other civil litigation.[1]

The great increase in the number of accidents and the growing number of claims for indemnification have induced large establishments to maintain claim departments, or an office known as that of claim agent. Presided over by skilled attorneys with numerous clerks at their disposal, these departments have as their object the fighting to as low a settlement as possible all claims for damages. Extreme methods were early adopted to limit the liability loss of their establishments. Having at their command large financial resources they were able to follow cases from court to court as long as the patience, or pocket-book, of the original plaintiff held out. The method employed by the claim agent of a large corporation is to obtain at the earliest possible time after the occurence of an accident evidence, which, if presented to a jury, will exonorate the employer. The means by which such evidence is obtained are not alwavs above reproach. In the first place, the greatest secrecy concerning accidents is maintained after their occurence, and every trace of them is removed as soon as possible. Investigation by outside parties is practically impossible. Then, all investigations are aided to the utmost by the officials of the company, whose desire it always is to hold the liability loss to a minimum. But, thirdly, in the selection and preparation of witnesses the claim agent is able, on account of his own superior knowledge of the subject of accidents and of the liability laws, to so direct the views of those who were present at the occurrence of the accident as to make them favorable to the defense. Here is brought into opposition with the untrained intellect and limited intelligence of the average employe, the acute brain of the man trained especially for the performance of just such duties. By intimidation, by continuing legal opposition, and by the employment of the best brains obtainable the claim department is made a weapon formidable indeed against the ignorance and poverty of labor, and one which aims not to perform justice, but to evade the force of law.

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[1] Seventy-five per cent of the time of trial courts in Cook county. Illinois, is taken up with personal injury cases. In his report for the year 1903, Mr. John F. Smulski, city attorney of the city of Chicago, says: "Another cause for this great increase in personal injury suits during the past ten years may be found in the increased activity of certain lawyers and physicians, who make it a special business to stir up litigation of this nature, and who have in very many cases entered into a practical partnership arrangement with each other. . . . There exists in this city today not only a large number of lawyers who make a specialty of this class of cases, but a number of corporations and adjusting agencies organized for the sole purpose of prosecuting claims of this kind."

Effective as is the claim department, the age of combination and of scientific methods has brought into being an organization which unites the work of many such organizations into one large company or corporation. The idea is an English one, which arose as a result of the Employers' Liability Act of 1880. So much was this act feared by employers that determined and organized resistance along legally qualified lines seemed absolutely necessary to the further maintenance of industry. Developing rapidly in England, employers' liability insurance was introduced into the United States in 1886 by the Employers' Liability Assurance Corporation (Limited). In the year 1903 fourteen such companies were licensed to write employers' liability insurance in the state of Wisconsin, whose business aggregated as follows: Total premiums received, $336,288; total losses incurred, $118,298, or 35.2 per cent of the former. The wide spread of liability insurance throughout the United States, and the relation of receipts to expenditures for losses incurred is exhibited in the following table:

EMPLOYERS' LIABILITY INSURANCE IN THE UNITED STATES, 1899-1903. RETURNS FROM FOURTEEN LARGEST COMPANIES.[1]

Year.	Premiums received.	Losses paid.	Ratio of losses paid to premiums.	Insurance in force.
1903	$13,571,738	$5,607,637	41.3	*$1,488,772,000
1901	9,002,852	3,971,449	44.1	1,136,546,000
1899	6,412,737	2,595,628	40.4	771,326,000

*Estimated from detailed figures for 1903 and 1901.

It is desired merely to call attention to the large aggregates in the three columns of totals and the great increase in each three year period. Comparison with similar life insurance figures for the same year throw these into comparative insignificance, but taken alone they represent an enormous amount of business in liability insurance transacted in a year.[2]

Employers' liability insurance is primarily and altogether a measure for the protection of the employer against his common law or statutory liability. It is as far from being a means of protection to the laboring man as anything can be which by depriving him by any means whatsoever of his just compensation proposes to pay dividends to stock-holders. For it must be remembered, first and last, that employers' liability insurance companies are modern money-making stock-companies, whose sole maintenance, as at present organized, lies in their ability to withhold from, if not to defraud, the employers of their insured the just measure of compensation which is their due in case of accident. For and in consideration of the stated premium, which varies in accordance with the size of the establishment of the insured and with the number of men therein and the nature of their employment, the insurance company guarantees to assume all the liability of the employer, incurred as a result of one or all of the particular occurrences specified in the contract and covering practically the entire range of accidents. At first sight this may appear to be as well a guarantee to the injured man. Two particular causes arise preeminently to forbid this: In the first place, the insurance company is merely performing for a remuneration the service which the employer previously attended to through the medium of his claim department or claim agent, and only in so far as the expense of the former is less to him than that of the latter does he partake of the advantages offered by the former. Consequently by as much as it was the duty of the claim department to minimize the expense of personal injuries, by so much, and more, is it necessary for the liability company to reduce the actual paid liability. In the second place, whatever might have been the philanthropic motives that brought the first liability company into existence with a possible guarantee not only of protection for the employer but as well of compensation for the employe, the increase in the number of such companies with the attendant competition for business has brought about a lowering of premium rates which more than ever makes it necessary to deny indemnification wherever possible. As a business proposition, every indemnity paid means so much less in the pockets of stock-holders at the end of the year.

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[1] Compiled from Insurance Year Book, 1904.

[2] Life insurance statistics: Total premium receipts, $447,543,822; total payments to policy holders, $225,842,072; ratio of latter to former, 50.4 per cent.

The policy of the liability insurance company is precisely that of its antecedent, the claim department. Every accident that results in the injury of an employe must be reported at once to the insurance company, in whose hands the entire conduct and management of the case thereafter rests. The entire care and personal responsibility of the employer is thus removed from his shoulders. Men of the greatest experience and skill in the management of personal injury and damage cases, trained for this specific purpose, are employed by the company. A professional and skilled investigation of the accident reveals either the liability or lack of liability of the employer. In the latter case, when the facts are established absolutely no amount of persuasion can obtain the smallest amount of compensation not allowed by law. The personal feeling of the employer towards the welfare of his servants is not present to compel a generous treatment of an unfortunate sufferer. From the heartless liability company the latter can look for nothing more than the least the law might allow him.

When the liability of the employer is discovered, the policy of the insurance company is always and unreservedly to take immediate advantage of the ignorance of the injured man and of his helplessness and want immediately after a disabling accident. The mass of American workmen are totally ignorant of their rights under the laws which they follow and respect. The very existence of the liability company in its present form depends in part, if not entirely, on the ignorance of the injured man, which allows him though he may be entitled to a fortune to reach out greedily for the smallest amount of relief. Ten, twenty or fifty dollars looks like a large sum to a man who is on his back with no prospect of working for an indefinite period, and with a family crying for the necessities of which the cutting off of their source of income deprives them. Though the courts sustain to a less degree today than formerly the release which is given in return for such payments, this fact is not ordinarily known to the injured man and such payment consequently is final. In dealing with an employers' liability insurance company an injured employe is a victim of circumstances. Without knowledge of his rights; unable often to pay for the legal advice which may mean so much to him; confronted by a smooth-tongued man of business, who styles himself a messenger of mercy; it is strange, and the exception rather than the rule, for him to refuse until he has obtained competent advice the offer made him. Ignorance of the meaning and value of legally prepared and executed documents, which to his eye and ear may seem insignificant enough, often leads him to sign away all his rights without any compensation whatsoever, or so to represent the facts of an accident as to render his testimony before a jury practically worthless. The concealment of the facts regarding accidents and the destruction of adverse evidence are other of the means employed by these companies.[1]

One or two instances will serve to show the methods of the liability companies. A young man, married, and employed in

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[1] "DONT'S" OF THE AETNA LIFE INSURANCE COMPANY.

"Don't tell injured employes that you are insured, and don't refer them to the Aetna.

Don't omit to at once label any tool or small appliance connected with an accident, so that it can be produced and identified later on.

Don't give any information about an accident to any one, or admit any person to the premises to enable him to obtain information. (The police and the Aetna's representatives excepted.)

Don't let witnesses in an important accident leave your employ without leavthe construction of a railroad bridge receives injuries of a disfiguring and exceedingly painful nature. Since his employer carries liability insurance, an agent of the company is sent several hundred miles to make an investigation. What to the inexperienced witnesses of the accident, and to the injured man himself, appeared to be an unexplainable occurrence, is readily solved by the insurance representative who straightway sees the possible liability of his company mounting into the thousands of dollars. Hoping to make a settlement for a few hundred dollars he approaches the injured man, who after consultation with his wife decides that $65.00 will fully cover the loss sustained. Again, a colored man employed in excavating for the Chicago drainage canal has a hip permanently dislocated by a premature explosion unquestionably due to the negligence of the employing company. Visited by a representative of a liability company as he is about to leave the hospital, even after he is made to understand that accepting anything then will be a barrier to further recovery, he decides that a suit of clothes and a ticket to Virginia will compensate him for the loss sustained and will make him happy again. Perhaps it is not well to do more than mention the case of the liability adjustor whose conscience forbade him to make a ridiculously low settlement with the wife and two children of a deceased workman, and who lost his position accordingly. It is to be hoped that this is an exceptional case rather than one of common occurrence.

Enough has been said of employers' liability insurance companies to indicate the field they are purposed to cover and the means employed by them in the pursuance of their business. It is, of course, necessary that many claims are continually settled by them while many find their way into the courts. It is practically impossible to ascertain the average sums awarded as indemnification in either class of cases. Insurance reports tabulate the total disbursements of individual companies for

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ing a record of their addresses—the loss of a valuable witness may imperil the success of your defense.

Don't forget that you pay the Aetna for protection against loss, that their interests are yours, and yours theirs, and that the economical disposition of claims means reasonable rates."

the settlement and payment of claims, but have in no case endeavored to obtain statistical evidence of the number of claims recorded. Manifestly it is to the advantage of the companies to conceal these facts, as much of their success depend upon their ability to reach low settlements.[1]

As an institution, the employers' liability insurance company, though conducting a legitimate business in supplying a social for an individual guarantee, exercises an influence on the unprotected working man which is positively brutal and inhuman. It may be said that in any given case the injured workman, because of his ignorance, is responsible for his own "fleecing," and that hence no socieal injustice is done; but men, who are interested in the problems which beset the progress of the human race, have answered that if the mere fact of man's relationship with man is not sufficient to safeguard and protect the weaker in his dealings with the stronger then surely a great want is felt by modern society, which though it cost the verv foundations of our social system must and shall be eradicated. Sooner or later an aroused public opinion will demand for the economically dependent workman recognition not only of his rights but of what is more essential, of his right to the enjoyment of those rights.

The work of the casualty companies has lately been opposed by a new form of organization which is spreading slowly in the great industrial centers. Organized ostensibly for the protection of workingmen's interest its aim is to supply to injured laborers the same kind and degree of service that the liability company gives employers. For a small annual sum, usually amounting to a dollar, these concerns agree to investigate thoroughly all accidents in which their clients are injured and upon the basis of a just and reasonable interpretation of the law delivering to them at their request such evidence as has been collected together with an opinion as to the liability involved. Entire labor unions are enrolled, and fees are payable through these organizations, to whom in addition is afforded the privilege of seeking any legal advice at no expense. One of these concerns has enrolled the members of no less than fifty unions, and the idea seems to be growing in favor among the union laboring body. Tags are distributed bearing the individual number of the wearer with instructions to notify the office when accident occurs. When such notification is received, a representative is sent to investigate and collect evidence. These concerns do not solicit the handling of cases that are urged for settlement, but it is needless to say that few pass beyond their offices.

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[1] A former attorney of a large liability company states that whereas the average payment of accident insurance companies for deaths and injuries is $200, the liability company with which he was connected has paid on the average $67.00.

It is apparent that such organizations as these possess the qualifications to perform at a reasonable remuneration a service of the highest public utility. At an expense of eight cents a month any workingman may be practically assured of obtaining his just deserts under the law if he but follow the advice always given to guard all evidence. The guarantee to the individual client is that he will be given the best obtainable legal advice, and under the present system of compensation this alone is a great boon to the working man. It effects a positive influence in the cause of advancing labor to a position of greater self-respect and in this way is of educational benefit. The practical effect of enjoying the protection of one of these concerns is the same as that experienced by every business man who has his personal attorney from whom to seek advice.

But is it possible for such an institution, organized as it appears, to protect the working population against a great injustice, to accomplish its purposes and at the same time satisfy its greater purpose of enriching itself? As long as they go no farther than they assert it to be their purpose to do, these concerns perform a highly useful and highly commendable purpose, but the temptations to go beyond this, and the same ignorance and illogical methods of labor itself, seem to be great obstacles with which to contend in such work. In the first place, by obtaining a large clientage such as it aims to do, the security company is in a position to receive the earliest information in regard to accidents, and as its influence widens more and more cases of injury will naturally come to its doors. If it is strong, the company will turn aside such cases as clearly involve no negligence on the part of the employer and in which no liability can be found. In the second place, if it does this it loses standing with the unions, who are only too ready to suspect discrimination and collusion, and in every case where liability is not declared its hold immediately weakens. For the workman after being told that liability sometimes exists decides that when he is injured it must exist; and whoever opposes him runs the risk of gaining his emnity. Thus it seems that the plan of security envolved by these concerns is lacking in practicability for the very reason that they can not stop where they set the limit to their purpose but are pushed on into the illegitimate, often, by the desire to hold their clientage. Such a work undertaken by a philanthropic or municipal organization would not meet with these obstacles and in some countries, as in Switzerland, such work is actually carried on under public direction.

The ultimate effect of such an institution would be to raise the plane of liability insurance. The concerns that have already taken up the business have been bitterly opposed by employers and by liability companies. Naturally, the cost of insurance becomes greater to employers, and their hostility is easily accounted for. But the work and field of the casualty company will in no wise be impaired, the same need of a social instead of an individual guarantee existing then as now. But the fact that a concern operating for the purpose of holding out to workingmen a valid guarantee of obtaining justice under the law shows again the weakness of what may now be termed the American system of compensating labor for industrial accidents.

The liability laws of the United States are far behind the times; they are, in fact no more than a remnant of the earlier days when the large-scale industrial methods and organization of society of today were totally undreamed of. The spirit and the letter of the law demand the payment of indemnification to employes injured through the negligence of their masters, and the mere existence of the law is sufficient proof of the necessity as a social obligation of such payments. It is not required to consider at this point the vast number of accidents for which the law makes no provision; that is another matter entirely. For what would the extension of the liability of employers to cover the entire range of accidents avail if that liability were not enforced? By increasing the number of injuries for which indemnification is due the business of the ambulance chaser and of the liability company would grow, while the laborer would profit but little. Legislation and the enforcement of proper observation of legislation are totally different matters. A system of employers' liability which declares that compensation shall be paid in certain cases in which certain conditions are encountered, but which provides no machinery adequate for the enforcement of such payment, can result in nothing but confusion, dissatisfaction and injustice among an enterprising people. Compelled by the press of competition every employer must guard well the exits to his cash drawer; an expense avoided is money saved. The congestion of the courts with personal injury cases, the presence in society of the ambulance chaser, and the prosperity of the casualty companies, are all evidences of the rottenness of the entire system, which works to the disadvantage not alone of the laboring man but of employer and of the general public as well. Mr. Eugene E. Prussing, in describing the condition of the trial courts of Cook county, Illinois, during a recent winter, says:[1] "The disregard for life and limb under corporate management, especially railroad management, the multiform accidents resulting from the increased use of machinery in recent years, the pernicious activity of legal and extra-legal 'ambulance chasers' have become a distinct social and legal evil, the effect of which is manifested in the congested condition of courts throughout the country....... A permanent remedy will not be found in increasing the facilities or personnel of the courts of justice, but rather in a reform of the business methods in the corporate and other employers, whose stockholders are finally the chief sufferers from the evil. The use of accident insurance companies and the consequent division of responsibility between corporate officials and treasuries on the one side and those of these companies on the other, have increased the evil and delayed the remedy. The incidental suffering and the practical denial of justice to all others in the community which have resulted may bring about the necessary reform in the revival of the employers' conscience, who will be made to feel by the complaints of his fellow men and the inroad on his pocketbook that 'Thou shalt not kill' or maim is the law of corporations as well as of men."[1]

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[1] Nation, March 10, 1904.

TOTAL OF CASES IN BOTH CIRCUIT AND SUPERIOR COURTS.

	1899.	1900.	1901.	1902.	1903, to April 23.	1903, April 22 on.
No. of cases.	350	599	472	543	214	281
Total damages asked.	$4,821,335.35	$8,436,150.00	$6,884,650.00	$8,855,800.00	$2,936,900.00	$3,366,600.00
Total judgments.....	506,702.35	600,170.13	546,968.05	816,700.75	303,965.00	192,348.00
Average demand	13,775.24	14,183.74	14,158.12	16,309.02	13,723.83	12,941.64
Av. judgment	1,447.72	1.001.95	1,158.83	1,504.05	1,420.39	684.51
Percentage of judgm'ts to damages asked for...	10.5	7.12	7.95	9.22	10.35	5.29

The general dissatisfaction caused by a system of employers' liability in its practical operation is not to be denied. The inevitable result of such a system is to arouse distinct animosities between the two essential factors of industrial production, which condition is much to be avoided. It is doubtful whether a practical solution of the difficulty lies in amending in any particular the existing employers' liability laws. It is held by some that the reversal of the burden of proof will bring order out of chaos and guarantee compensation to the workman if he deserves it. Without considering the difficulties with which such a proposal would meet, raised by our legal and social traditions which refuse to hold a man guilty until proved so, it is probable that the reversal of the burden of proof would be accompanied merely by a reversal of methods on the part of employers and casualty companies with the end in view of manufacturing favorable evidence rather than of destroying all evidence. As long as the basis of a system is unstable, the structure erected upon it is necessarily weak; a system of employers' liability based on the law of negligence, is unsatisfactory because it is founded not on a question of fact, such as the actual occurrence of an accident, but upon one of mere opinion, such as the source of negligence. Questions such as the reasonableness of the care exercised by employers in particular cases; such as the fact of the assumption of particular risks; such as the presence of contributory negligence either as a remote or a proximate cause of an accident: all these are questions of opinion rather than of fact, and as such are sure to vary in the minds of different men. "It is absolutely inevitable, when contraverted questions of social and economic justice come before the courts that they should be decided according to the preconceived beliefs of the individual judge upon these social and economic questions." [1]

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[1] The following table compiled by the city attorney of the city of Chicago and found on page 99 of his report for the year 1903, shows the trend of personal injury cases in Cook county. Though having no direct bearing on the question of employers' liability, the figures here represented give a good idea of the success of claims made under the latter laws. The great difference between the amounts claimed and those awarded indicate the effectiveness of combating through the courts the claims made by unprofessional and greedy lawyers; but it indicates as well the unsatisfactoriness of a system so surrounded with uncertainties.

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[1] Winston, E. M.: "Social Influence as a Factor in Judicial Decision." Arena, Sept., 1903.

CHAPTER III.

STATE COMPULSORY AND VOLUNTARY COMPENSATION.

The European attitude towards the problem of compensation for industrial accidents has differed materially from that manifested in the United States today. Up to the year 1871 no state had attempted to remove by legislation the evil which was felt to exist under the operation of the civil laws of employers' liability. The rules established by the Napoleonic code were observed throughout those parts of Europe which had fallen early in the century under the sway of the first empire. Although the doctrine of common employment was foreign to the Napoleonic code, the dissatisfaction occasioned by the difficulties attendant upon litigation was supreme, and in Germany, immediately after the formation of the empire the first employers' liability law was passed.

Although in its operation the German act of 1871 proved most unsatisfactory, in one or two respects it is not devoid of interest. In the first place, it antedates by some nine years the first English legislation on the same subjct, and is but an evidence of the progressiveness of the German people as a nation. In the second place, it contains one provision which commends itself to the student of the subject as the first piece of negligence legislation which wholly or in part removes the burden of proof from the plaintiff to the defendant. The act provides that in case of suit brought to recover for injuries sustained by an employe of a railroad company it is necessary for the company to prove its lack of negligence. Applying as it did only to railway employes and on account of the limited liability of the companies themselves, the act could effect no permanent relief to workmen as a whole, as the existing feeling demanded, and efforts were immediately directed at the very root of the matter, with the hope of discovering an effectual means of bringing about relief. And led by Germany, the industrial nations of Europe have one and all taken their stand on the theory of compensation which disregards the law of employers' liability based on negligence and looks to higher and nobler principles as foundations on which to build.

In the United States the question of compensation for industrial accidents is rarely looked upon as other than a legal one; the key-note of the theories maintained and operated not only on the continent but also in England at the present time is that the social and not the legal view-point is foremost. This position was not attained without a struggle; Germany, it has been noted, first tried to amend satisfactorily the civil law, and England made the same unsuccessful effort. But in both cases the end reached was the same, and Europe has adopted almost as a unit the definite principle (1) that the operation of employers' liability laws are unjust and should therefore be abolished and (2) that all accidents, irrespective of the parties contributing thereto should be compensable.

In the present chapter it is proposed to review briefly the actions of the leading industrial nations of Europe and of such other states as have recognized, by specific legislative enactment, the inefficiency of any system of employers' liability to accomplish the required benefit to society and the proper status of the problem of workmen's compensation for industrial accidents as one of social rather than legal importance. Chronologically it might be considered better to commence this review by turning attention to Germany, but on account of the closer ties of friendship and of blood which unite us with England, as well as the greater probability of her example being followed in this country than that of Germany or of any other nation, I shall consider first the status of the problem of workmen's compensation for industrial accidents in England.

ENGLAND.

The many defects of the act of 1880 served only to increase the interest already aroused in the question of compensation. The operation of the insurance schemes of the German nation was watched with the keenest eagerness to learn of a successful method of treating this problem, and whereas the direst disasters were pictured for German industries after the passage of the laws of 1884, the English observers soon learned that they, and not their cousins across the channel, were mistaken as to the fact. But the English people are thoroughly conservative, and whereas the Germans recognized officially the duty of the state to insure compensation for every accident, they could do no more than admit the right of labor to certain compensation in every case irrespective of any but the grossest negligence on the part of the injured man. During the dozen years following the passage of the German law, several attempts were made to bring the matter to a crisis in England, but not until 1897 were they successful. The British Workmen's Compensation Act[1] of that year is proof of the supremacy in England of the principle "that where a person, on his own responsibility and for his own profit, sets in motion agencies which create risks for others, he ought to be civilly responsible for the consequences of what he does."[2]

The general tenor of the act of 1897 is expressed in its opening section. "If in any employment to which this act applies personal injury by accident arising out of and in the course of employment is caused to a workman, his employer shall, subject as hereinafter mentioned, be liable to pay compensation in accordance with the first schedule of this act." Nothing in the act is to be taken as affecting the civil liability of employers, but the injured man is left free to choose under which law he will proceed to recover damages.[3] No compensation is allowed for accidents due to the serious and wilful misconduct of the injured party. No accidents are to be compensated which extend over a period of less than two full weeks, during which the injured man has been unable to earn full wages at his usual employment. Disputes as to the fact or amount of compensation are settled by boards of arbitration, if not by agreement. The second schedule of the act declares that any arbitration board, existing at the time the claim for compensation is made, for the purpose of adjusting disputes between employers and employes shall have power to act as arbitrator of all disputes arising under the act. If there be no such board, any person agreed upon by both parties may settle the matter, and in the event of the failure to reach a settlement within three months of the date of claim, the matter shall be entrusted to the decision of the county court judge. The costs incident to arbitration shall be in the discretion of the arbitrator.

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[1] For text see Appendix C.

[2] Colder—The Prevention of Factory Accidents, p. 57.

[3] Common Law, Employers' Liallity list of 1880, and Workmen's Compensation list of 1897.

No claim for compensation will be considered valid unless made as soon as practicable after the occurrence of the accident, or at least six months thereafter in the case of injury and six months after death. Contracting out is expressly forbidden in Article 3, which, however, permits the adoption by employers and by employes of any system of compensation, benefits or insurance, which upon examination appears not less favorable to the Registrar of Friendly Societies than the provisions of the act. The act applies to undertakers "on, or in, or about a railway, factory, mine, quarry, or engineering work, and to employment by the undertakers as hereinafter defined on, in, or about any building which exceeds 30 feet in height, and is either being constructed or repaired by means of scaffolding, or being demolished, or on which machinery driven by steam, water or other mechanical power, is being used for the purpose of the construction, repair, or demolition thereof."[1] By the special act of July 30, 1900, the benefits of the act were extended to agricultural workmen.

The first schedule of the act deals with the "scale and conditions of compensation." "The amount of compensation shall be"—where death results from the injury, if the workman leaves any dependents wholly dependent upon his earnings, an amount equal to the total of the wages received from the same employers during the last three years, provided the amount is not less than 150 pounds ($729.98) nor greater than 300 pounds ($1,459.45). If the workman leaves dependents not wholly dependent upon his wages, that amount shall be paid which shall be determined by agreement or by arbitration. If he leaves no dependents, funeral expenses to an amount not exceeding 10 pounds ($48.67) shall be paid. Where total or partial incapacity results, a weekly amount shall be paid not to exceed 50 per cent of the average weekly payments received during the past twelve months, or during a lesser period if he has not been so long in the service of the one employer. Such weekly payments shall not exceed 1 pound ($4.87). Any person receiving weekly compensation under this act, or otherwise benefitting, must submit to medical examination by a duly authorized and competent practitioner, the expenses of which submittal must be met by the employer.

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[1] Article 7, Sec. 1.

Unfortunately the act of 1899 made no provisions for a thorough statistical investigation of the working of its various provisions. This was unfortunate, because at the present stage of the question of compensation for industrial accidents it is above all desired to have on hand full and complete records of all attempted remedies. Though opinion as to the effectiveness of the act must, therefore, be more or less general, many defects have been found, most of which became apparent immediately after the act went into operation. In the first place, the desire of the enactors of the law to reduce to a minimum the amount of litigation has not been fulfilled. The principal cause of such litigation has been the question of definition and interpretation. It is, of course, not to be supposed that any act of Parliament can be so worded as to admit of none but a single interpretation, but the results in this case fell far below all expectations. Questions as to the meaning of the word "accident" and as to the actual occurrence of such an event as indicated thereby have caused by no means the smallest amount of litigated disputes. Other questions as to the jurisdiction of the act in particular cases, have been raised, all of which demand authoritative decision apart from arbitration. The alternative allowed by the act of choosing either the common law or the law of employers' liability, under which to obtain damages, has also given rise to no small amount of litigation. If suit brought under either of the other laws prove unsuccessful, it lies within the power of the court to grant such compensation as is provided by the terms of the compensation act. which provision has led to some unscrupulous lawyers to thus institute litigation in the hope of blackmailing employers. The act further provides that all decisions of arbitrators shall be entered on the record books of the county courts, whereby they shall have the same standing as decrees of court, but no provision is made for the enforcement of this rule. "On the whole we come to the conclusion that the amount of litigation produced by the Workmen's Compensation Acts of 1897 and 1900 has been very small when compared with the great number of cases settled by agreement without any recourse whatever to legal aid, or to proceedings in court. On the other hand, we think that that proportion may, and ought to be, still further reduced by amendment of some of those provisions of the acts which have been found to be most productive of actual or threatened litigation, and by the provision of more effective machinery for expeditious and inexpensive settlement of doubtful questions of fact, especially by amendments tending to increase the importance of the functions of Medical Referees."[1]

Another great cause of dissatisfaction with the act is found in the fact that it makes no guarantee of compensation even in those cases wherein no doubt exists as to the facts of the accident or of the jurisdiction involved. The act in no case endeavors to prescribe rules whereby employers shall hold forth to their workmen a guarantee for the payment of compensation within the terms of the act. The obvious method to be followed by employers thus to make a substantial guarantee is to be found in liability insurance, and it is true that the greater number of employers have adopted this method of securing not only their employes but themselves as well. But the minority, who through lack of compulsion have avoided this expense, are for the most part the smaller and less financially responsible employers, who, in as much as they are not sufficiently impressed with their duties to society and to their workmen to take the necessary precautions in advance, may hardly be expected to comply, without resistance, to the demands of the compensation act when they are particularly affected. The lack of protection in this particular afforded the employes of bankrupting employers is most apparent. It is to be noted, however, in this regard that employers' liability insurance affords an effective protection to the working population whose employers carry such insurance; for, contrary to the common law, the compensation act prescribes specific amounts of compensation which must be paid in specific cases.

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[1] Consult Report of the Departmental Committee appointed to inquire into the law relating to Compensation for Injuries to Workmen. Vol. I, Report and Appendices, 1904.

Certain other serious imperfections have been found in the acts of 1897 and 1900, some of which have tended to disappear, but the most of which remain to decrease materially its efficiency. As originally interpreted, the act afforded no relief to casual labor, which rarely remains in one establishment for more than a few days at a time. Dock labor was particularly affected by this rule, which seemed to base the amounts of compensation on the weekly wage, but this view was pronounced erroneous by the House of Lords in 1901. The man who is injured in his first day of employment is now entitled to compensation on the basis of his working wage percisely as is the employe of long standing.

The British Workmen's Compensation Act of 1897 and its amendment of 1900 are not looked upon as finalties either by the employing or the employed classes. The Royal investigation of 1904 is but an evidence of the realization that the present legislation is unsatisfactory and that a change may be expected at any time. The basic idea of the English system is sound, and if not entirely satisfactory to the employing public is not so greatly feared now that the effect of the burden thrown upon industry in consequence of the act is not found to prejudice British interests in foreign markets. Adopted on a rising market, the scheme has not yet felt the effects of industrial depression, ability to withstand which is one of the great tests of economic and social experiments.

Perhaps the greatest drawback to the whole system is the failure to provide other means of settlement than by arbitration, which tends to delay the payment of compensation beyond the time when it is most needed. Arbitration is necessarily slow, but it is thoroughly in accord with the English, and, in fact, with the modern civilization sense of justice and of equity. The framers of the act undoubtedly desire to allow the greatest possible freedom of individual initiative, while insisting upon the right of injured labor to compensation. That the operations of the act are not unduly harsh to employers is signified by the small number of "contracting out" arrangements submitted to and approved by the Registrar of Friendly Societies. In his annual report for the year ending December 31, 1898, that official stated: "It may be said without hesitation that the result of the first six months' working of the contracting out section has been to show on the part of the employers, who have applied for certificates for schemes, a desire to meet their workmen in the most handsome manner, and on the part of the workmen, an excellent feeling of fairness and good will." [1]

As to the future of the British Workmen's Compensation Acts, it can only be said that the tendencies point in two general directions: first, to the extension of the act to other and various lines of employment, such as domestic servants, marine workers, etc.; and second, to the initiation by the government of some scheme of national insurance whereby the individual employer will be relieved of all personal responsibility aside from providing the necessary funds. It is to Germany that England is now looking for suggestions, and as the principle of her present legislation is borrowed from the Fatherland, so too, in all probability will those which are to govern her future actions.

GERMANY.

The spirit that prompted legislation in Germany went a step farther than that embodied in the later British acts in providing for the raising and administration of funds to be devoted to compensation. Whereas the English law states that compensation shall be paid by empolyers for all accidents, the German act of 1884 declares that compensation shall be paid by employers for all accidents and *in a certain particular manner.* While opinion may vary as to the philosophy and wisdom of thus extending the sphere of the state it is certain that the Germans have succeeded by invoking state aid in putting into operation the best and most effective scheme yet devised of dealing with the problem of compensation. By the means of compulsory insurance, compensation has been placed on a plane of reliability unsurpassed.

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[1] Bulletin of Labor, No. 32, p. 8, "The British Workmen's Compensation Act."

Insurance is a true science. Granting a rational and well advised organization, the success of any scheme of insurance depends upon the proper observance of, and emphasis placed upon, the relations of cause to effect and of effect to cause. As the basis of fire insurance is the probability of the breaking out of a fire coupled with the estimated amount of loss thereby; as the basis of life insurance is the ratio of deaths to the entire population, accompanied by the probability of death at certain ages; so the true basis of accident insurance is the probability of accidents in conjunction with the estimated severity of injuries. Insurance is a science based on the observations of the past and is successful or the reverse as events tend to repeat themselves. Reliability and security—the principal requisites of a successful scheme of compensation—are the guarantees of a well organized and well administered system of inurance. For her application of the principles of insurance to the problem of providing compensation for industrial accidents for her entire body of workmen, and for her success in erecting a suitable structure of administration, Germany deserves great credit.

"We consider it Our Imperial duty to impress upon the Reichstag the necessity of furthering the welfare of the working people. We should review with increased satisfaction the manifold success, with which The Lord has blessed Our reign, could We carry with us to the grave the consciousness of having given Our country an additional and lasting assurance of internal peace, and the conviction that We have rendered the needy that assistance to which they are *justly entitled.* Our efforts in this direction are certain of the approval of all the federate Governments, and We confidently rely upon the support of the Reichstag, without distinction of parties. In order to realize these views a Bill for the Insurance of Workmen against *Industrial Accidents* will first of all be laid before you, after which a supplementary measure will be submitted providing for a general organization of industrial *Sick Relief Insurance.* But likewise those who are disabled in consequence of *Old Age* or *Invalidity* possess a well founded claim to a more ample relief on the part of the state than they have hitherto enjoyed. To devise the fittest ways and means for making such provision, however difficult, is one of the highest obligations of every community based on the moral foundations of Christianity. A more intimate connection with the actual capabilities of the people, and a mode of turning these to account in *Corporate associations,* under the patronage and with the aid of the state, will, We trust, develop a scheme to solve which the state alone would prove unequal." Such was the message of Emperor William I delivered on November 17, 1881, to the Reichstag, which commenced the work of reform embodied in the German Workmen's Compensation Acts. The increasing dissatisfaction with the Employers' Liability Act of 1871 coupled with the rise of that political philosophy which accords the state the highest attributes for the improvement of social conditions, and the growth of the Social Democratic party, led the Government to attempt a solution of this most difficult problem.

Of the social-political acts recommended by the Emperor, the Sick Insurance law of 1883 was the first to be passed. It was succeeded in the next year by the act which it was designed to supplement — the Accident Insurance law of July 6, 1884. The object of the law is to provide compensation for all coming within its scope for all accidents occurring during the performance of their duties, and does not apply to accidents happening outside of their employment. The two laws supplement each other in that the injured man is aided during the first thirteen weeks of his disablement by the sick insurance. In the original act of 1884, insurance was made compulsory for all employes in mechanical industries receiving annual wages of 2,000 marks ($476.00)[1] or less, but by subsequent amendment the scope of the law has been so extended as to include all industrial, agricultural and forestry pursuits, as well as men employed in the government and state service, whose salaries do not exceed 3,000 marks ($750.00). The Agricultural Accident Insurance Law allows the extension of compulsory insurance to all employers and to domestic service connected with agriculture and forestry. Unlike the Industrial Accident Insurance Law, the Marine Accident Insurance Law is limited in its scope, not by the actual amount of income but by an amount up to 3,000 marks ($750.00) ascertained on the basis of average rates of wages. For the insurance of small enterprises this law further provides that employers are subject to compulsory insurance if they form part of the crew and do not employ as a rule more than two wage-earners. Out of a total population in 1902 of 58,000,000 people, 19,083,000, or approximately 32%, were enjoying the benefits of accident insurance. With the further extension of this insurance to persons employed in commerce, handicrafts and the petty trades this proportion will be considerably increased.

The law of 1884 provided that all persons coming within its scope shall receive compensation for all accidents, and further lays the entire responsibility of providing for and administering this compensation upon employers. In general, employers' associations are formed embracing all the employers in the same industry in the country or district. On account of the decentralization of agriculture, employers here are organized entirely on a territorial basis. Through executive boards and private agents, these associations provide for the relief of every person injured by accident in the industries which they represent. The police, to whom all accidents must be reported within two days of their occurrence, institute investigations into their nature and severity, the results of which are handed to the executive boards of the industries in which the accidents happen. On this and such other information as is presented to it the board makes its award of compensation. In case of dissatisfaction, appeal is possible to arbitration boards of the districts in which the accidents occur, composed of two members, a president and a vice-president, appointed directly by the government from the number of public officials in the district, and of two members each from the employers' associations and the laboring population. Appeal from the decision of this tribunal may be made directly, and at no expense, to the Imperial Board of Arbitration, which sits in Berlin and which exercises a general supervision over the accident insurance associations of the entire country. Of the members of this board, three are appointed by the throne for life, eight for temporary service.

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[1] One mark = $0.25. Purchasing value is practically $0.50.

Funds for the compensation of accidents are raised by the associations by an annual levy of assessments based on the expenses of the previous year, and varying with the individual employer with the extent of his business (total amount of wages paid and number of men employed) and the probability of accident in his establishment. Payment is made on the order of the association through the free delivery service of the post office department, by which the necessary funds are advanced until the end of the year. Relief is afforded all those entering upon their fourteenth week of disablement, though in extreme cases arrangements are made with the Sick Insurance Associations by which the injured man remains under their care until recovery is complete. In such cases, however, all expenses incurred after the thirteenth week are defrayed by the Accident Association. For bodily injuries of a temporary character (1) free medical attendance and aid is afforded, (2) as well as an allowance up to 66⅔% of the yearly earnings of the injured man, or free hospital treatment until cured and an allowance for his family as in the case of death. Compensation for fatal injuries are (1) funeral expenses up to twenty times the average daily wage at the time of the accident and not less than $7.50, and (2) an annuity to survivors beginning from the day of death amounting to 60% for the widow and children (under 16 years of age) and to 20% for parents, should they chance to be needy.

For the funds of the agricultural employers' association assessments are based on the land tax and on the standard of a fair wage scale determined by local authorities. For the management of insurance for state and government employes boards of control are organized, which are empowered to disburse the funds provided for in the annual budget of the department. In 1902 the number of accident associations was divided as follows: Industrial, or the so-called dangerous trades, 66; agricultural associations, 48; and offices for state works, 481.

So complete is the organization of the entire accident insurance scheme that the collection of reliable statistics of the operation of the laws has been made possible.

The total receipts of the accident associations up to and including the year 1901 were $257,313,578, composed of contributions of employers to the amount of $227,230,582, and of interest on accumulated funds, $30,082,996. Contributions for the year 1902 were $31,415,828, and interest $3,932,705, making an aggregate of $35,348,533. Of the total expenditures for the period 1885–1895, 80.4% was for the payment of indemnities and 19.6% represented the cost of administration. The latter item in the earlier years was extremely high, but has gradually tended to decrease until in 1898 it was only 14.3%, or 5.3% less than the average for twelve years. For the year 1902, expenditures aggregated $32,149,250, of which $27,033,275, or 86.6%, was devoted to indemnities, and the remaining $4,165,950, or 13.4%, to costs of administration. Of the total expenditures of the three branches of workmen's insurance (sick, accident, and old age and invalidity) the benefits paid amounted to 89.08% in 1891, 91.41% in 1901, while the percentage of the cost of administration was 10.92% in 1891 and 8.59% in 1901. It is interesting to note carefully the relation existing between these two items of expenditure because it offers one of the strongest arguments in favor of the German system.

For the purpose of accumulating a surplus fund, contributions for the first year were assessed at the rate of 300% of the actual needs, and have decreased at the rate of 33⅓%, 50% and 10% for three years, and for the next ten at the rate of 10%. In 1902, this fund aggregated no less than $49,798,565. Attention will be called later to the use made of this fund. During the year 1902, 711,330 accidents were compensated, being at the rate of one to every 26.8 persons insured. It must be remembered, too, that only those cases are compensated by the accident insurance which last over to the fourteenth week. In 1891, 94% of the total number of accidents were cared for by the Sick Insurance Association, only 6% lasting beyond the thirteenth week, and passing thus into the hands of the accident insurance.[1] The average amount of compensation paid in 1902 was $38.00 per case.

Opinions as to the moral, social, and political effect of compulsory insurance vary. By most English and American economists the entire theory is deprecated on the ground of political subserviency, social degredation and moral degeneration. True, it is not in accord with Anglo-Saxon, and particularly with the American spirit of individuality and private initiative, which most openly and strongly abhors compulsion. The Workmen's Insurance laws were in the first instance conceived to stem the uprising current of socialistic opposition to the government, but so far as accident insurance is concerned socialism is present to a greater extent in fancy than in fact. Wolff, while arguing for the adaptation of the German Accident Insurance System to English needs, says: "It is absolute nonsense to brand it as socialistic and to put it on the same level with Old Age Insurance, which is an entirely different affair."[2] And there is a great deal of truth to his words. For the state does not enter into the insurance business, but merely prescribes the means of insurance and makes it obligatory upon employers to use them. The Employers' Associations are entirely self-administering, democratic bodies, enjoying all the rights of private initiative common to individuals. The state has created them by creating a work for them to perform. Save to insist on the faithful performance of this duty, the state does not interfere with them. The fundamental principles of the German workmen's insurance are, on the one hand, compulsion, and, on the other, far-going freedom of action.

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[1] See John Graham Brooks' article on "Compulsory Insurance in Germany," to which is devoted the 4th special report of the Department of Labor. p. 91.

[2] Wolff, H. W., in an article on "Accident Insurance" in the Economic Review of July, 1895, p. 313.

Paternalism it is, of a kind; but of that kind which recognizes the duty of the strong towards the weak, of the whole towards its component and essential parts, and does not hesitate to act accordingly. Whatever imperfections or flaws may be found with the external and detailed application of the laws, the kernel is sound, and in so much as the Germans themselves look upon them with such undisguised favor and gratification, it scarcely behooves others to condemn the system unreservedly.[1]

The workmen's insurance laws have been a benefit not alone to the laboring population, but to employers as well. By the imposition of a burden approximating uniformity when averaged year by year, the risk of industry has been reduced. By the operation of compulsory accident insurance the uncertainties of employers' liability, the burdens imposed by which never being calculable in advance, have been removed. Under the common law method of compensation, the task of equalizing the employer's risk from accidents was left to insurance companies. And it has been demonstrated in Germany that the expense under the new system is actually less than under the old. The German law recognizes the rights of the laboring man and guarantees them to him. Thus his legal status is raised to a higher plane, which makes of him a better and more patriotic citizen. By the certainty of relief in case of distress without the degrading influence of receiving gratuitous gifts, his social position is as well advanced. Physically, also, the workingman has fared better since 1884. On account of the heavy burdens attached to the compensation of sickness and injury employers throughout the empire, individually and collectively through their associations, are expending large sums to counteract the influences which tend to undermine and cripple the human body. The principal tasks of the accident insurance associations, after satisfying demands made upon them for compensation, is the prevention of accidents. As a result of the system of assessing contributions, it is manifestly to the interest of individual employers to do away in every possible and consistent manner with the causes of accidents; in addition, the associations are empowered to make and enforce rules and regulations for the prevention of accidents, which are directed equally against employers and employes. The prevention of accidents has become to these associations a science, interest in which is kept alive as much by the aroused social and humanitarian instincts as by the element of personal and financial returns. It is not possible to arrive at an adequate appreciation of the effects of this tendency by statistical investigation of the operation of the accident insurance laws, because a uniform basis of comparison cannot even be approximated year by year. Not only has the scope of the act been greatly enlarged since the beginning of its operation, but the facilities for making claims and obtaining compensation have been improved. Therefore, whereas a comparison of the ratios between the number of persons compensated and the number insured for the two years, 1895 and 1902, shows a decided advantage for the former year, it can not be said with justice that accidents are proportionately on the increase. The ratios, 1.7% and 3.7% respectively for the two years, merely serve to indicate the growing efficiency of the law as far as its ability to compensate all accidents is concerned.

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[1] For the World's Exhibit in Brussels, 1897, the Imperial Insurance Department prepared a pamphlet entitled "Guide to the Workmen's Insurance of the German Empire." A similar one was compiled for the Paris World's Exhibition of 1900 in explanation of a picture 15 feet high and 9 feet wide, of an oak tree emblematic of the German workmen's insurance. This pamphlet is entitled "The Results of Workingmen's Insurance of the German Empire." At the St. Louis Universal Exposition of 1904 were distributed in connection with the German exhibit a series of five pamphlets on "The German Workmen's Insurance as a Social Institution," one entitled "Guide to the Workmen's Insurance of the German Empire, 19 4," as well as a guide to the German Workmen's Insurance Exhibit. The writer found these several pamphlets an unending source of material in the preparation of this article.

There exists, in addition, a close relationship between the figures last given and the sick insurance associations. By the establishment of relief stations and hospitals in centers of activity, by the education of workmen in matters pertaining to first aid to the injured and by the thorough organization of their service, these organizations have exerted a positive influence in decreasing the nation's mortality rate. Consequently, a greater proportion of the serious injuries last through the thirteenth week and are turned over to the accident associations. Again it is possible to denote merely tendencies, but that these beneficent influences are constantly exerting themselves upon the community there can be no doubt.

Compulsory insurance imposes a direct tax upon industry, and one which, though it existed prior to the passage of the insurance laws, was not clearly defined and determined—one that was subject to variations from year to year. As is readily seen, this tax, though practically constant throughout a given industry, must vary in different industries in accordance with the dangers involved therein. In 1894, this tax averaged for all the industries coming within the scope of the accident insurance law 1% of wages paid. On mine and quarry owners it approximated 2% and in the building trades 4%. In many of the less dangerous trades, however, the burden is but a fraction of 1%. And Germany, which is a world competing nation, has suffered as a result of this burden on industry neither at home nor in her international trade. On the contrary, the years 1884–1904 have witnessed an expansion in trade and commerce and in domestic welfare never before experienced by the empire. Taken as a whole, industry in all its branches, remote and near at hand, bears a healthier aspect. A friendly relation such as has never before been experienced exists today between the employing and laboring elements of the population, and marks a community of interest embracing the entire nation which is adding much to the solidarity of the German race.

AUSTRIA.

Next to Germany, the greatest exponent of the principle of compulsory state insurance against accidents is Austria.[1] As in Germany, the movement towards this form of protection has been gradual, having started as far back as 1834 when the state enacted regulations to govern mutual aid and guild benefit societies then in existence. Later legislation provided for the formation in every industrial establishment of benefit funds to be administered by employers in behalf of sick or injured employes. All such legislation was of the nature of compulsion, but the results attained were scattered and very superficial. In 1886, less than 200 corporations out of 35,000 had created these funds, and the existing laws were generally disregarded.

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[1] Consult Willoughby: Workingmen's Insurance, Chap. III.

Up to this time no specific action had been taken in regard to compensation for industrial accidents. As in England and the United States the law of employers' liability provided but little protection. Except in the case of railway employes, workingmen had no legal claim for indemnities from their employers unless their injuries were due to the direct act of the latter. The unsatisfactoriness of the system and the need of reform were clearly felt. Instead, however, of endeavoring to extend the civil liability of employers, it was decided to institute a system of insurance, and as the success of Germany's experiment was at that time before the eyes of all Austria, the German system in the law of 1887 was bodily adopted, with a few minor modifications in detail.

By its extension in 1894, the Austrian Accident Insurance law makes insurance obligatory on all employes in the mechanical and dangerous industries, the building trades, and in agricultural and forestry works, as well as on transportation and theatre employes and firemen. The general purpose is to extend the law to all pursuits wherein the risk of accident is great. For the administration of insurance eight territorial divisions are formed, each governed by an administrative board whose members are appointed, one-third by the government, one-third by the employers of the particular district and one-third by the employes whose insurance is undertaken by the board. In this matter of division for administrative purposes the Austrian system differs from the German. It is difficult to determine which is the more efficacious and the more economical. The Austrian system tends to the betterment of conditions in an entire district; the German, to that in single industries, without regard to the number of men who are not constantly associated with one particular industry. The latter is scattered and decentralized, owing to the large number of associations formed but the scientific study of the conditions attaching to the prevention of accidents is open to greater possibilities in an association controlling a single industry.

The basis for compensation is in Austria, as in Germany, the amount of the earning capacity of the injured man during the years preceding his injuries. Death and total disability pensions and annuities are paid, ranging from 20% to 60% of the previous year's wages. Compensation based on the daily or weekly wage is allowed in the case of accidents which result in temporary disability.

Funds for the maintenance of the system are raised by contributions, nine-tenths of the total being subscribed by employers and one-tenth deducted from the wages of the insured. As in different industries the risk of accidents varies, it was found necessary to devise some scheme of equitable division of assessments among the establishments in the different industries. A danger scale, with coefficients ranging from 1 to 100, is divided into twelve classes, each of which has attached to it certain index numbers, as, for instance, Class XII, 81–100 inclusive. Industries are assigned to particular classes, and each establishment is given its particular coefficient, depending upon the number and seriousness of the accidents which occurred in it during the year previous. The effect of such an arrangement is to increase the diligence of employers in avoiding accidents in their establishments, in order that by obtaining lower coefficients of danger their contributions may be lessened.

In one other important respect the Austrian differs from the German system. Under the latter, contributions are so assessed as to defray each year only the expenses of that year with no regard for the future liabilities which the payment of pensions involves. In Austria, however, these future liabilities are capitalized as encountered, the amounts raised each year being sufficient to cover all liability for the future incurred during that year. Such sums are determined from mortality tables, the idea differing not at all from that of an ordinary annuity arrangement, whereby a specific sum is laid aside which shall yield a certain amount of income during the estimated life of the beneficiary. The superiority of the one system over the other is largely a matter of opinion. The German system, however, is applicable only to such associations as are assured a long life; the deep-sea building association was compelled to adopt the capitalizing scheme on account of the fluctuating character of the industry, which may employ large numbers of men this year and none the next. As yearly more persons through disability, or the death of one on whom they depend, are thrown on the resources of the insurance funds, the contributions under the German system must increase correspondingly until the level is reached at which the number of dependents is approximately the same year after year. It is estimated that this point will be reached in Germany in the year 1940.[1] In Austria a reserve fund is created which from the outset is sufficient to meet all coming expenses incurred to date. A saving is thus effected in administration, and the entire system of insurance is vested with a greater air of security and of reliability, and though the actual yearly cost to the insurers in the beginning is greater, it will average less over an extended period owing to the gain from interest on the reserve fund.

COMPULSORY COMPENSATION IN OTHER STATES.

Austria has not been the only country to adopt the principle of compulsory state insurance against accidents and follow in the lead established by Germany. Several states of Europe have discovered the advisability of solving the troublesome problem of compensation for industrial accidents in this manner, and one state in America has adopted the principle of compensation for all accidents, applicable to but a small group of industries, however. It is not necessary for the purposes of this paper to investigate these several schemes in any considerable detail, in as much as the description of the German and Austrian systems suffice to indicate their essential features. For the purpose of conveying an impression, however, of the extent to which this idea has seized upon society in various parts brief mention will be made of them.

Switzerland found the same difficulty as did Germany and Austria in her attempt to so extend and modify the civil code as to afford the needed protection to her workingmen. In 1887 the National Assembly instituted an investigation into the cause and effect of accidents in the Republic, which lasted three years. This investigation was extremely thorough and complete, and resulted in the introduction in 1892 of compulsory sick and accident insurance bills, after an overwhelming majority had declared by referendum its belief in compulsory state insurance. The law of October 5, 1899, extends compulsory insurance to working people of all callings, whose annual wage receipts are below $450, and voluntary insurance to employers. Administration of funds is undertaken by a federal bureau connected with which is a federal insurance court for the settlement of disputes. Contributions are levied upon employers and employed at the rate of three to one, and the state grants a subsidy of one-fifth of the amount thus raised. Compensation is not paid when injuries are due to the negligence, willful or otherwise, of the injured. The relief afforded is free medical treatment and disability pay from the sixth week; pensions up to 60% of the annual wage for permanent disability; and pensions up to 40% for dependents in case of death.

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[1] The time when the entire number of the insured have enjoyed the benefits since they entered the industrial world. Consider the respective age limits, 16 and 70, the difference between them added to the time of the commencement of the insurance scheme, 1884, gives this time approximately.

Norway, 1894, and Finland, 1898, have both passed compulsory accident insurance legislation. Owing to the small extent of industry in these countries their move is relatively unimportant, save as indicating the spread of the principle. Norway excludes from the benefits of her legislation fishermen and seamen. Administration is by an imperial bureau, which has its locally appointed representatives in all industrial centers. Compensation is paid in Norway after the fifth week; in Finland, after the seventh day. Funds are raised in both cases entirely by employers.

Italy has tried various experiments to afford relief to her workmen against accidents, the earlier of which will be mentioned under another heading.[1] The law of March 17, 1898, obliges employers to insure all their workmen engaged in trade and receiving wages up to $425 per year. Employers, however, are given the choice of insuring with the regularly and specially appointed state institution or under any one of four alternative arrangements. They may take out their insurance with any regular insurance companies authorized to conduct business in Italy; railroad companies may institute private funds for the insurance of their employes; other private funds may be established, provided only that they insure at least 500 men, confer the benefits set by law, and deposit a guarantee with the state; or, finally, employers and employes of establishments embracing 4,000 men may establish mutual associations. Contracting out is forbidden. All accidents are compensated, but the rather unusual provision exists that after payment for injuries the insuring company or association may institute legal proceedings for the recovery of the amount paid on the ground of gross or intentional negligence on the part of the injured and compensated party.

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[1] State voluntary insurance.

France has established by law of April 21, 1898, compulsory insurance for seamen in a state institution. Premiums are paid, one-half by employers and one-half by employes. Belgium has, since 1868, compelled her mining population to be insured against accident in relief clubs, the support of which is contributed to by employers, employes and the state and province.

The Maryland Workmen's Compensation Act,[1] of 1902, is the only legislation of its kind enacted in the United States. All employers in the coal and clay mining, quarrying, and railroading (street or steam) industries are made liable for the deaths of their employes due to accident. Employers are offered the opportunity of insuring their employes with the state insurance commissioner at rates ranging from $.60 to $3.00 per annum per man, one-half of which sum may be deducted from wages. Though a great gain, the act is considered satisfactory neither by employers nor by employes.

VOLUNTARY STATE COMPENSATION.

Another form of state activity in relation to workingmen's compensation for accidental injuries is found in the various voluntary state insurance schemes employed in some European nations, and in the numerous insurance organizations established by private individuals and corporations and aided or regulated by the state. In all these schemes, it seems to be the endeavor of the state merely to lend its moral and financial support to the undertakings. In the several forms of insurance schemes enjoying the benefits of state control and direction participation is by no means compulsory, but is voluntary for employers and employed alike. But the presence of the state lends to the system a guarantee and aspect of solidarity which serve to invite the general availment by both parties of the benefits offered. In some cases the state has been obliged to enforce positive regulations in order to insure the honest and faithful administration of funds and the protection of an unwise and gullible public against unscrupulous management.

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[1] Burnett, G. E., in the American Journal of Economics, Vol. XVI, p 591.

The experience of Italy, up to 1898, offers the best example of voluntary state-aided insurance against industrial accidents. Borne along by the flood of opinion, which in the early eighties swept away from the continental mind any further idea of eliminating the accident loss to labor by an extension of the civil liability of employers, Italy was all but won over to the precepts of compulsory insurance. During the period when Germany was formulating her extensive plans, similar undertakings were being pressed in the Italian legislature. But opposition to state compulsion was too strong to be overcome at that time and when a proposition was laid before the legislative body by a number of leading financial institutions to provide for the formation of a privately administered accident insurance bank, or association, it met with immediate approval. The law of July 8, 1883, authorized the establishment of the National Bank for the Insurance of Workingmen against Accidents, as the result of a contract between the government and a federation of banks.

The central factor in this movement was the Savings Bank of Milan, assisted by many of the strongest financial institutions existing for the benefit of the people. In return for certain aid from the government, the federation proposed to found and administer the bank, whose capital stock was placed at 1,500,000 francs ($289,500). Management was placed in the hands of a board of directors chosen one each by the federating institutions, and of an administrative committee selected by the Bank of Milan, whose subscription to the stock was 625,000 francs ($120,625). The entire expense of the bank was shared by the several institutions in proportion to their subscriptions. The government was given the right of approval in certain instances of rates and regulations. In addition, the bank is exempt from taxation and enjoys the privileges of the post office department, such as "franking" and the establishment of branch offices in postal stations.

Three kinds of insurance are offered by the bank, individual, collective and combination. The first is, of course, that wherein the individual assumes the entire responsibility of his insurance and pays all the premiums; the second is much in vogue in all countries wherein compulsory insurance has not been adopted, and implies the insurance by the employer of his entire body of workmen with or without their consent; the third is a combination of collective and liability insurance, whereby the employer is relieved of his civil code liability, and operates precisely as does employer's liability insurance in the United States.

The amount of indemnification is as follows: In case of death or permanent total disability, a sum according to the policy agreed upon, but not to exceed 10,000 francs ($1,930); in case of permanent partial disability a sum graduated according to the severity of the injury; in case of temporary disability a daily stipend after the fifth day succeeding the accident for a period varying in accordance with the policy, but not to exceed 300 days. The average indemnity agreed upon in cases of death or total disability has been about 1,000 francs ($193.00), and in cases of temporary disability an average of about one franc ($0.193) per day. Accident tables compiled from the operations of the German system are taken as a basis on which are computed the twelve risk classifications used in calculating premiums.

Below is reproduced a table showing the operations of the national bank for the years 1884-1893. Though the corresponding data for the next five years is not included, this table is sufficient to demonstrate many points of interest in regard to the bank and to the system which it serves to exemplify. It must be remembered, however, that the bank, though supervised in its operations by the state, is a public spirited corporation privately administered.

OPERATIONS OF THE NATIONAL BANK FOR INSURANCE OF WORKINGMEN AGAINST ACCIDENTS, 1884-1893.

Year.	Persons Insured.			Persons insured at end of year.	Payments Made On		
	In-dividually.	Collectively.	Total.		Individual policies.	Collective policies.	Total.
1884	42	1,621	1,663	443	$48 56	$925 64	$974 20
1885	304	12,220	12,524	13,830	360 52	1,124 25	1,484 76
1886	544	35,134	35,678	31,830	561 64	28,318 29	28,879 93
1887	1,062	44,474	45,536	46,522	1,132 06	29,725 87	30,857 92
1888	1,264	63,102	64,366	65,418	1,366 87	45,775 29	47,142 07
1889	1,283	92,342	93,625	86,645	1,576 61	68,907 73	70,584 34
1890	2,080	101,464	103,544	101,372	3,730 81	83,092 51	86,823 32
1891	1,891	112,811	114,702	107,432	2,619 44	86,100 86	88,720 29
1892	2,009	121,401	123,420	112,486	2,773 01	90,867 71	93,640 72
1893	1,973	129,012	130,985	119,447	2,373 39	98,249 62	100,623 01

[1] Willoughby: "Workingmen's Insurance," p. 212.

The rapid increase in the number of the insured from the very start is indicative of its need and of the confidence placed in its reliability and stability. But even as large as the number of the insured has grown, it seems not to have reached a point justified by the good intentions and diligent efforts of the bank. The great failing of voluntary insurance against industrial accidents is as well shown in this table as it might ever be. After operating over ten years, assisted and guaranteed by a government supported by a working population of about nine million persons, the bank succeeded in extending its benefits to but 130,985 of them. And this was accomplished only with the aid of an unique species of philanthropic institution called "Patronats," which, situated in various parts of the country, lent their serious endeavors to increasing the number of the banks insured. These societies assumed entire control of spreading information concerning the formation and operation of the bank, and to their efforts alone is due what measure of success it has attained. Acting as business agents, they attend gratuitously to all the details of the taking out of insurance. Their importance is attested by the fact that from 1884 to 1893 the Patronat of Milan alone procured the insurance of 116,781 workingmen.

Another significant feature of the operation of the Italian bank is the relative number of men insured individually and collectively. Practically 97% of those participating in the benefits of the institution were insured not through their personal efforts but through the generosity of their employers. This is but an indication of the great failing of voluntary insurance as a system of wide operation. Unless compelled to do so, the average individual workman will not avail himself of the opportunity of providing in advance for posible future misfortune. Whether this failure is due to supposed inability or to lack of foresight is beside the point; the experience of the national insurance bank of Italy shows conclusively that under the most favorable conditions he will not. Employers, on the other hand, were quick to take advantage of the facilities offered by the bank. Especially those who in the past had conducted local benefit schemes. The results being practically the same, the gain, resulting from ridding themselves of the expense and management of such schemes made it profitable for them to insure their workmen in the bank.

Viewed in the light of a successful remedy of the evil brought upon workmen as a result of accidents, the Italian national bank has not merited the praise which greeted it upon its formation. Its defects, due perhaps in a measure to the laxity of a management whose interest in its success was public and philanthropic rather than private and personal, can be attributed to nothing but to the system of which it is such an excellent example. Combining as it does the solidarity and reliability afforded by government supervision and aid with the initiative found rarely outside of private ventures, the bank is a model for the organization of all similar projects. Since 1898, this institution has served as the government insuring organization, under the compulsory scheme at that time adopted.

Other examples of state voluntary insurance are found in France and Belgium. These, however, have met with less success than that of Italy, and deserve little mention. The French bank for insurance against accidents,[1] created by the law of July 11, 1868, insured in the twenty-four years following only 33,112 persons, on whose policies $27,645.41 were paid in indemnities. The premiums paid amounted to but $39,817.53. Three grades of insurance are provided for, varying in accordance with the amount of the yearly premium which may be three, five, or eight francs. Applicants must be above the age of twelve years. Relief for permanent incapacity is in the shape of a pension purchased from the National Old Age Pension Bank with a capital 640 times the amount of the annual premiums paid by the insured and injured man. For permanent incapacity to follow his usual employment the compensation is one-half this amount. In case of death a double yearly payment aggregating twice the annual pension allowed for total incapacity is granted the heirs.

In spite of the good intention of its founder, Leopold II, the Belgium bank for the insurance against industrial accidents is not an insurance institution, but one that dispenses alms to the needy as the state of the funds on hand permits. Administration of the fund, which in 1894 aggregated $464,415.90, is in the hands of a committee of five appointed by the crown.

State compulsory insurance has met with uniform success wherever adopted; state voluntary insurance is of little account as a remedy for the social evil attached to the inability of injured workmen to secure compensation for accidents met with in the course of their employment. The lack of enterprise and initiative in any organization that has not for its object personal gain is the undoubted cause of the failure of the voluntary schemes to bring under their protection all who are in need of assistance.

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[1] Willoughby: "Workingmen's Insurance," p. 129.

CHAPTER IV.

PRIVATE RELIEF FOR INJURIES DUE TO ACCIDENTS.

In the foregoing chapter the distinctive features of those schemes of compensation organized or directly aided by state authority were discussed. It is the purpose of this chapter to investigate those methods of relief organized entirely apart from state interference and administered some with and some without any exterior regulations. Workingmen's insurance has given rise to a considerable amount of controversy over the nature of the duty of government, and in regard to the measure of state activity in relation to such an institution, a general classification is possible as follows:[1] (1) state compulsory insurance; (2) state voluntary insurance; (3) private insurance regulated by legislative enactment; (4) private insurance existing with no interference on the part of the state. In the following pages the various schemes of relief for disabilities arising from accident fallling in the last two divisions will be considered; the last chapter attempted the investigation of those schemes belonging to the first two divisions.

Private relief is best considered from three points of view, varying as do the parties interested in their organization and as the methods of participation therein. In the many attempts to lessen the rigor of the application of common law principles initiative has been on the part: (1) of employes; (2) of employers; (3) of employes and employers acting conjointly. All such schemes may be said to have had their origin long before the organization of the present industrial system, at a time when there existed a community of interest which united employes with fellow-employes, and employers with theineighbors and friends who worked under their guidance. In their various forms, they are manifestations of the desire of the prosperous and well to assist the needy and disabled. Although modern conditions have led to the introduction of widely different reasons for the existence of many of such schemes, they are based even today on the principles of voluntary and brotherly assistance. In regard to the amount of positive benefit conferred upon those in whose interests these efforts are expended, it is certain that, though often accompanid by many grave abuses, they accomplish a great social and economic good.

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[1] Willoughby, F. W.: "Workingmen's Insurance," pp. 22-25.

I. RELIEF BY EMPLOYES.

To obtain for themselves relief in cases of distress laborers in the United States through their unions have made many endeavors, some of which have been eminently successful. But the American trade union lacks the stability which is essential to the operation of financial schemes of any sort, and which is gained only through age and experience. The trade union movement in this country is even now in its infancy. Whereas 118 of the existing British trade unions were organized prior to 1850, none of the present American unions was organized at that time, and only twelve national unions were in existence prior to 1880.[1] It is not surprising, therefore, that trade union benefits have not been as widely extended in this country as in England, nor that with but few exceptions none of the national unions conducts benefit features on any large scale. A few unions, however, have met with great success in this work, and are today a source of great relief to their members. In none of these has the attempt been made to offer protection particularly against disability due to accident; all deal with accidental injuries as with sickness, and with death from accident as with death from natural causes. And it must be remembered, too, that trade unions proivde in practically all cases for strike and out-of-work benefits. Thus it happens that sick and death benefits are rather the incidental and attractive features of trade unions than the essential factors to the furthering of which the unions owe their origin and existence.

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[1] See Bemis, E. W., Bulletin of Labor, No. 22, p. 361 seq., for discussion of trade union benefits.

The Cigar Makers' International Union of America is one of the oldest national labor organizations in this country, and has the reputation of maintaining relief work on a larger and better developed scale than any similar union. Its work in the line of sick and death benefits for the sixteen years ending in 1897 is shown in the following table:[1]

MEMBERSHIP, SICK AND DEATH BENEFITS, AND AVERAGE COST PER MEMBER TO THE CIGAR MAKERS' INTERNATIONAL UNION OF AMERICA, 1882-1897.

Year.	Membership Jan. 1.	Benefits Paid.		Average Cost of Benefits.	
		Sick.	Death.	Sick.	Death.
1882	11,430	$17,145	$1,674	$1 50	$0 15
1883	13,214	22,250	2,690	1 69	20
1884	11,871	31,551	3,920	2 66	33
1885	12,000	29,379	4,214	2 45	35
1886	24,672	42,225	4,820	1 71	20
1887	20,566	63,900	8,850	3 11	43
1888	17,199	58,824	21,319	3 42	1 24
1889	17,555	59,914	19,175	3 39	1 09
1890	24,221	64,600	26,043	2 63	1 06
1891	25,000	87,472	38,062	3 61	1 67
1892	27,045	89,906	44,701	3 59	1 79
1893	26,788	104,391	49,458	3 86	1 83
1894	26,987	106,758	62,158	3 99	2 32
1895	27,828	112,567	66,725	4 04	2 40
1896	28,074	109,208	78,768	3 89	2 80
1897	27,318	112,774	69,186	4 13	2 53

The benefits, sick and death, averaged for the last year given $6.65 per member. During the early eighties the sick benefit was $5.00 per week for 8 weeks. Later the time limit was extended to 13 weeks, at which point it has continued.

The constitution of the union provides that "every member who shall have been for not less than two years continuously a contributing member........shall be entitled, should such member become sick or disabled in such a manner as to render such member unable to attend to his or her usual avocations, to a sum of $5.00 per week........; provided such sickness or inability shall have been for at least one week........and no member shall be entitled to any sick benefit for a longer period than thirteen weeks in any one year." The death benefit originally was $50.00, payable only to members of at least one year's good standing in the union. In 1896, it was decided to pay this benefit after two years' good standing, $200 after five years, $350 after 10 years,' and $550 after fifteen years' standing.

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[1] Bemis, pp. 369-371.

The United Brotherhood of Carpenters and Joiners of America pays to a member in good standing, and not over 50 years of age when joining, a death benefit of $100 after membership of six months and $200 after one year. Disability benefits are paid by the national organization of $100, $200, $300 and $400 after, respectively, one, two, three, and five years' membership. Beneficial members are assessed by local organizations 50c a month or more, 20c of which is paid to the General Secretary for the defrayment of benefits.

The International Typographical Union is the oldest American trade union, dating its organization back to 1850. Benefit features other than strike and out-of-work have received little attention. The membership as indicated by the per capita tax for the months of December, 1903, and January, 1904, was approximately 46,365. The union pays a burial benefit of $70.00 on the death of a member in good standing, but has no benefits for temporary or permanent disability. A large number of the locals maintain sick and burial benefits, but over these the international has no control. As a rule, the local benefits amount of $75.00 or $100; in some few instances, where the benefit is on the assessment plan, it is as high as $450. The German American Typographia, which in 1893–94 became a branch of the International Typographical Union, pays benefits as follows: in case of sickness, $5.00 a week for 50 weeks, after which $3.00 a week for 50 more weeks, or $400 at the most. After receiving this amount, however, no member may make further claim for two years. The death benefit is $200.[1]

The British Amalgamated Society of Carpenters and Joiners having a membership in the United Statee, in 1897, of 11,392, pays an accident benefit of $700 for total, and $350 for partial, disability. The Amalgamated Glassmakers' International Association, with a membership in March, 1904, of 45,000, pays a death benefit of $50.00 after one year's membership and $75.00 after two years or more in good standing, as well as a $150 benefit for total disability. Local unions make their own arrangements in regard to sick and accident benefits, and "in nearly all cases see the member through, as the saying is."[1] In the International Brotherhood of Blacksmiths "local unions may, if they so desire, enact a sick benefit, which shall be governed by local by-laws."[2] Members of the Boot and Shoe Workers' Union pay 25c a week in dues, which entitles them to a sick benefit after six months' good standing; of $5.00 per week for 13 weeks after the seventh day after claim is made, and death benefits of $50.00 and $100.00 respectively, after six months' and two years' membership. The Journeymen Barbers' International Union of America, with monthly dues of $1.35 payable to the general union, provides a sick benefit of $5.00 a week for 14 weeks after the second week. Members of the Amalgamated Association of Street and Electric Railway Employes of America are entitled from the general association after one year's membership to funeral and disability benefits of $100. Sick benefits are regulated entirely by local unions. In May, 1904, the Amalgamated Meat Cutters and Butcher Workmen of North America adopted a death benefit scheme to take effect January 1, 1905, which will pay $50.00 after six months' and $100 after one year's membership. With individual dues of $1.50 per month, members in good standing in the Lithographers' International Protective and Beneficial Association are entitled to sick and accident benefits of $5.00 per week, up to eight weeks in the year. Death benefits are paid ranging from $50 to $500.

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[1] Bemis, Bulletin of Labor, No. 22, p. 386.

The examples stated serve to show the entire absence of uniformity in the insurance schemes of the various unions. The insurance regulations of the Iron Moulders' Union of North America displays even as great a lack of uniformity in a single organization. Dues are $1.25 a month, 25c of which is placed in the national security fund, and 40c is paid to the International treasurer; of this amount 10 per cent is devoted to insurance purposes. The sick or disability benefit is $5.25 per week for 13 weeks after the first; the death and total disability benefit ranges from $100 to $200, though the receiving of the latter is a bar to the receiving of the former. Local unions provide various sick and death benefits. The inconsistency and want of unified purpose in these endeavors is displayed by the constitution and by-laws of the Iron Moulders' Union, No. 17, Indianapolis, which provides as follows:[1] "This union shall create a fund to be known as a Funeral Fund, by an assessment of 10 cents a month per member, for the purpose of hiring bands, etc., at funerals; this assessment to continue until the sum of $75.00 shall have been realized, when it shall stop until a death shall occur among the members of this beneficiary fund, when it shall begin again until the maximum amount shall have been reached. It shall be optional with the members of this union as to whether they become a beneficiary of this fund......... Should the relatives of any deceased member, who is entitled to the benefits of this fund, object to having a band at the funeral of the deceased they shall be paid a sum equivalent to the amount necessary for hiring a band." This quotation is interesting as an evidence of the great lack of true appreciation by laboring men of their own needs.

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[1] Wm Figolah, General Secretary.

[2] Art. V, Sec. 4, of constitution.

In general it may be said of trade union benefits for injury and death due to accident, that they are found in but a small percentage of the national organizations, and even there they are small and totally inadequate. The expense of this form of insurance is difficult to determine, in as much as from the general assessment levied on individual members all benefits and administrative expenses as well are paid. It will be noticed also that the principal work of relief in cases of sickness and accident is left in the hands of local organizations, to be handled as is there seen fit. The prevalent idea is the old, unsystematic one of fraternal assistance; that those who are in closest touch with the unfortunate members should consider it their duty to undertake on their own initiative the responsibilities of caring for their needs when in distress, and that the feeling of brotherhood which underlies the trade union movement is sufficient guarantee that every needy member will be "seen through" his difficulty.

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[1] Page 14, Art. ..I, Sec. 5, of constitution.

The railway employes of the United States through their Brotherhoods provide for themselves relief for accidental and natural death and total disability. Railroading is admittedly one of the most dangerous of occupations, and it is noteworthy that the million or more men employed in the transportation service of the country should have seen the need and advantage of organizing benefit features on a scale sufficiently large to guarantee reasonable amounts of relief. The national organizations whose members are engaged in the different branches of the railroad service are: The Grand International Brotherhood of Locomotive Engineers, the Order of Railway Conductors of America, the Brotherhood of Locomotive Firemen, the Brotherhood of Railroad Trainmen, the Brotherhood of Railway Trackmen, the Switchmen's Union of North America, the Brotherhood of Railway Carmen, the Order of Railway Telegraphers, the Brotherhood of Railway Expressmen of America, and the International Brotherhood of Maintenance-of-Way Employes. The organization of expressmen is scarcely two years old, and consequently has not yet attempted relief work on any considerable scale; on account of the relatively small risk of danger in their occupations the telegraphers have not developed a scheme of insurance; the maintenance-of-way employes have but recently given up a well defined and seemingly successful relief venture. The switchmen's union was greatly weakened by the great strike of 1893, and attempts nothing but local relief.[1]

The organization of relief features varies in different brotherhoods. The locomotive engineers have organized and incorporated a distinct department, which is managed entirely apart from the general administration of the brotherhood. The other three largest brotherhoods conduct their relief work under the control of the general management. All of the four largest organizations compel participation in the relief features by all members not otherwise physically disqualified. Sick and accident benefits are not paid by the national organizations, but are provided by the locals, who are bound in this work by nothing but their fraternal duty.

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[1] Consult E. R. Johnson: "Brotherhood Relief and Insurance of Railway Employes," Bulletin of Labor, No. 17.

Policies payable upon death or total disability are issued by the various brotherhoods for stated amounts varying from $400 to $5,000, according to the age of the member at the time of his application. The Locomotive Engineers' Mutual Life and Accident Insurance Association issues policies of $750 and $1,500, which members may secure to the maximum amount of $4,500. The Order of Railway Conductors' Mutual Benefit Department issues policies in five series, A, B, C, D, and E for the amounts respectively of $1,000, $2,000, $3,000, $4,000 and $5,000. Those not over 30 years of age when joining are eligible to any series; those over 30 years, but less than 38, to series A, B, C, and D; those between 38 and 45, to series A, B, and C; those between 45 and 50, to series A and B; and those between 50 and 60, to series A. No one over 60 years of age is admitted to the insurance department. The Brotherhood of Railway Carmen's Mutual Aid Association issues policies of $1,000, only one of which may be subscribed for by any one member. The trackmen, engineers, and firemen set a maximum for subscription, which is respectively $2,400, $4,500, and $1,500.

Payment for policies is in all cases by assessment and as occasion demands, for every case of death or disability occuring. The engineers are assessed 50c per $1,500 of insurance carried. The conductors pay $1.00 per $1,000. Assessments are $1.00 per month for eight months of the year and $2.00 for the remaining four months, the average cost per $1,000 being in the neighborhood of $14.00 a year. The premiums in the other brotherhoods are on the same basis, and are practically the same in amount per $1,000 of insurance.

The systematic organization of relief features on a comprehensive scale by the national bodies has been attended by the organization of local relief and other schemes calculated to deal more particularly with the temporary ailments. Five Ladies' Auxiliaries have been formed with the object "to secure to its members support and assistance in time of sickness and distress."[1] The grand president of the Ladies' Auxiliary to the Order of Railway Conductors says in regard to the scope of the relief work of the local divisions: "We visit the sick, care for those who are in need, and whenever there is a call for assistance in the family of a conductor, we do all we can for them. Our particular work is in the families of our members, but we work for the families of order men (in times of need) whose wives do not belong to our order. We aim to do our work so no mention is made of what we do."[2] Such efforts as these, though commendable in the highest degree, do not meet the needs of the case.

No systematic plan of local relief has been adopted in any of the brotherhoods. The method commonly employed differs little from that found in other purely fraternal orders, such as the Foresters and Odd Fellows. One of the greatest drawbacks to the success of any such scheme from the standpoint of the common justice owed a man injured in the course of his employment is, that pride often leads to the concealment of the needs which accompany disability. The man of means naturally is anxious not to inflict himself on the mercies of his friends, and the poorer man is reluctant to appear less able to care for himself than his wealthier brother. And it must be noted, too, that the members both of the railroad brotherhoods and of the fraternal orders are drawn as a rule from a class of people of relatively high intelligence and earning capacity, who are in reality well able to meet all the ordinary needs of life as well as to prepare for future misfortunes. The death benefits of these organizations partake of the nature of ordinary life insurance, and are of such an amount as to be more than mere burial expenses, as the death benefits of the trade unions are found to be.

The Friendly Societies of England and the *Societes de Secours Mutuels* of France, Belgium and other continental countries represent in a most highly developed form the efforts of labor to provide relief for itself in case of distress. The

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[1] From the constitution of the Ladies' Auxiliary to the Order of Railway Conductors. See article by E. R. Johnson, above mentioned, pp. 568-569.

[2] Vide supra, p. 569.

Friendly Societies had their origin in the friendly intercourse of neighborhood families, which later developed into the present form of systematic self-help. While in practically no cases dealing with specific relief in case of accident, these societies treat all worthy temporary disability like sickness. Their work in the earlier years, after they had separated from the guilds, was conducted purely on the assessment basis, but the growth of industrial methods accompanied by the centering of large laboring populations in single districts made the establishment of a more systematic method quite essential. National organizations now exist, which like the trade unions permit the transfer of a laboring man from one part of the country to another without the loss of timely assistance of friends when in need. With a total membership in 1895 of 2,210,476, ten of the largest of these societies had an income of some 17 million dollars, and disbursed over 12 millions in the shape of benefits. Their total assets at the time aggregated $81,333,678.[1]

The internal development of the Friendly Societies is extremely interesting as showing the possibilities of laboring men caring absolutely for their own extraordinary needs when left to their own unaided and unguided resources. The abuses which attend the handling of large amounts of money and property seemed to call for the intervention of the state in the management of their interests as far back as the latter part of the 18th century, but the natural abhorrence of the English people to state interference prevented the accomplishment of much by the government. The law of 1793, later variously extended, gave to the Friendly Societies many privileges otherwise denied them on condition of registration and of compliance with certain minor parliamentary regulations. The office of Registrar of Friendly Societies was created in 1875. In spite of the privileges accompanying registration, many societies prefer to this day to remain independent of the state. Though avoiding government interference with their methods, the Friendly Societies have made the greatest progress along the line of financial and administrative improvement. The unfairness and incompetency of a scheme of insurance founded on the assessment basis called for careful investigation on the part of those members who had fared badly. As a result, the English Friendly Societies represent today the most successful operation by laboring men of a system of insurance as scientifically and actuarially correct as the compilation and practical use of mortality statistics and tables can accomplish. Nor have the workmen's compensation acts had any effect on the popularity of this means of accident insurance. This is largely due to the fact that membership in the societies includes membership in the relief scheme and is inseparable therefrom. Employers are apt to complain that in cases of temporary disability the relief afforded by these societies coupled with that granted under the acts often gives the injured man more than his usual wages, and an apparent desire among those thus doubly protected to meet with injury is not infrequently hinted at.

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[1] Willoughby, W. F.: "Workingmen's Insurance," p. 244.

Of great significance is the rapid growth during the latter half of the last century of stock companies engaging in the accident insurance business. The problem of providing compensation for accidents is shown to permit of scientific treatment by the application of insurance principles, at a cost small enough to attract the public and large enough to make the business one of profit to stockholders. Accident insurance had its origin in the rapidly developing use of steam power in the years 1840–1850. The fear of accidents occasioned by the increasing popularity of railroads made insurance a necessity. The English Railway Passengers' Assurance Company, chartered in 1849 declared its object to be: "To insure all who do now or shall hereafter travel by railway, compensation for personal injury or loss of life consequent upon or incident to railway conveyance, whether arising from accident or negligence otherwise than wilfull."[1] The development and increase in number of accident insurance companies has been very rapid, until at the present day some thirty companies are engaged in the business in the United States.

The general scheme of accident insurance is this. In consideration of a stated quarterly or yearly premium the insurance company agrees to pay certain sums in case (1) of death, (2) of disablement, (a) permanent, and (b) temporary. The different grades of disablement are set forth specifically in the contract, and vary as the injury tends to affect the ability of the injured to pursue his former avocations. Since 1893, accident policies have been written including weekly compensation for disablement resulting from the more dangerous diseases, such as typhoid, typhus, scarlet fever, smallpox, diphtheria, and measles.[1] At the same time were introduced annuity provisions in case of permanent disability as well as double benefits for death or disablement arising from railroad and other specified accidents. The various risks are broadly divided into three classes, according to the nature of the business or employment of the insured. The first class includes professional men and those engaged in mercantile pursuits; the second class, master tradesmen, and others superintending, but taking no part in, the trade or occupation; the third class, all those engaged in mechanical and constructional pursuits. The premiums of the last class are higher in proportion to the amounts of the policies than those of the other two. A still further division provides for nine classes, the highest of which is the better than preferred, and the lowest the very dangerous. Policies are written for one year and are not cumulative, but each year's payments are returned, value received, in the protection afforded. Life insurance attempts to prepare for a certain future occurrence, and is based on the probability of its happening within a certain period; accident insurance attempts to prepare for a possible future occurrence.

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[1] Insurance Guide and Handbook, 1901, p. 245.

The benefits paid by accident insurance companies are much larger than those paid by any other schemes of compensation for accidental disability. The following outline of contract benefits of the Aetna Life Insurance Company, of Hartford, Connecticut, is indicative of the method determining, and the amounts of, payments. Combination benefits, which indemnify for loss incurred while the insured is a passenger in any regular passenger conveyance propelled by steam, electricity or cable, and in some cases while in a passenger elevator or a burning building, are also shown. The benefits are, respectively: for death, loss of both eyes, loss of hands and feet, or of one hand and one foot, $5,000 and $10,000; for loss of right hand, $1,667 and $5,000; left hand, or either foot, $1,667 and $2,000; one eye, $1,250; permanent disability, $5,000 and $10,000. A weekly indemnity for temporary disability is paid amounting to $25.00 and $50.00 for a period limited to 200 weeks. The yearly cost of this policy is $20.00 and $25.00, respectively, as it contains or not the combination rider.

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[1] Vide supra, p. 247.

It may possibly appear that such insurance as this is the most practicable form of accident compensation for the American wage-earner. One great difficulty must be overcome, however, in obtaining the co-operation of the entire body of workingmen in such a scheme. The average laborer is totally unable to accumulate the amounts necessary to pay quarterly or annual premiums. The problem of compensation is in a large measure bound up in the greater question of poverty, and as will be seen later it is the poor and otherwise dependent sufferer whom it is the desire to benefit.

To meet the demand of those to whom the outlay of any considerable amount of money for insurance is an impossibility, several insurance companies have evolved what is known as an industrial insurance policy, which is issued to cover on small weekly or monthly premiums the lower grades of risks. It is within the last five years, however, that distinct industrial accident insurance policies have been issued, the business up to that time being confined to life insurance. On industrial life and accident policies, $7,172,869,000 of insurance has been written in the years 1876–1903.[1] The number of policies in force in 1903 and the amount of the insurance thereby contracted for, was $14,600,502 and $1,977,185,534. The premium receipts for the same year were $98,063,490, against which amount losses to the amount of $27,408,191 were paid by the 15 companies engaged in the business.[2] Great as these amounts seem, they are small in proportion to the corresponding figures for

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[1] Insurance Year Book, 1904.

[2] Insurance Year Book, 1904, p. 292. Column of ratios in table supplied.

Life Insurance in the United States in the same year: total premium income, $147,543,822; payments to policyholders, $225,842,072.

GROWTH OF INDUSTRIAL INSURANCE IN THE UNITED STATES.

Year.	No. of companies	Insurance written	Insurance in Force.		Premiums received.	Losses paid.	Ratio of losses paid to premium.
			Number	Amount.			
1903	15	$596,510,565	14,600,502	$1,977,185,534	$98,063,490	$27,408,191	27.9
1900	18	566,037,936	11,215,531	1,468,474,534	65,962,426	19,607,808	29.5
1895	11	380,832,362	6,943,769	819,521,573	37,008,536	12,398,782	33.5
1890	9	242,250,959	3,875,102	428,037,245	17,647,036	6,423,341	30.7
1885	3	93,736,727	1,360,376	144,101,632	5,530,622	1,919,533	34.7
1880	3	34,768,035	228,357	19,590,780	1,156,360	430,631	37.2
1876	1	727,168	4,816	443,072	14,495	1,958	13.5
Totals for years 1876-1903, incl..	....	7,172,869,411	....	....	$735,379,029	$228,766,641	31.1

In the field of industrial accident insurance, the Metropolitan Life Insurance Company and the Phoenix Mutual Life Insurance Company issue a grade of policies with weekly premiums of $.10, which is sold among laborers in all employments where wages are small. While offering larger and more effective relief than trade union benefit funds, this grade of insurance is not comparable with that handled by those companies which have not gone to such an extent in the lowering of premiums. It is clear that the cost alone of collection of premiums must very greatly diminish the effectiveness of the scheme from the standpoint of the insured. At a cost of $1.00 a month the North American Accident Insurance Company issues policies paying indemnities ranging from $60.00 to $15.00 monthly for partial disablement, and $600 to $100 in case of accidental death, in accordance to the classification of risk into which the insured comes. Following is a table prepared by the above named company of the benefits payable on its monthly premium policies:

SCHEDULE OF RATES.

Class.	Monthly accident indemnity.	Monthly sickness indemnity.	Death indemnity accident.	Loss of hand or foot.	Cost per Month.	
					Accum. protection policy.	Accum. protection "special" policy.
AA	$60	$40	$600	$300	$1 00	$1 50
	70	60	700	350	1 50	2 00
	100	60	1,000	500	2 00	2 50
A	50	40	500	250	1 00	1 50
	70	50	700	350	1 50	2 00
	80	60	800	400	2 00	2 50
B	40	35	400	200	1 00	1 50
	50	50	500	250	1 50	2 00
	70	50	700	350	2 00	2 50
C	35	35	300	150	1 00	1 50
	50	40	500	250	1 50	2 00
	60	50	600	300	2 00	2 50
D	30	30	300	150	1 00	1 25
	40	40	400	200	1 50	2 00
	50	50	500	250	2 00	2 50
E	25	30	200	100	1 00	1 25
	35	35	300	150	1 50	2 00
	40	40	400	200	2 00	2 50
F	20	20	100	100	1 00	1 25
	30	30	100	150	1 50	2 00
	40	40	100	200	2 00	2 50
FF	25	30	100	50	1 00	1 25
	35	35	100	50	1 50	2 00
	40	40	100	50	2 00	2 50
X	20	30	100	50	1 00	1 25
	30	30	100	50	1 50	1 70
	40	35	100	50	2 00	2 50
XX	15	15	100	50	1 00	1 25
	20	20	100	50	1 50	1 75
	25	25	100	50	2 00	2 25

"Any man between ages 18 and 55 in any occupation. Accident benefits in force from date of policy. Illness benefits 30 days later. Special policy covers first week of sickness. If one year's premium is paid in advance ten per cent. is immediately added to all benefits. If paid monthly ten per cent. is added to benefits at end of year. Benefits are doubled if injured or killed while riding in or on a passenger conveyance. All accidents covered—any sickness covered."

Class XX contains men engaged in and about railroad yards and railroad engines; class X, riggers, structural iron workers, etc.; class FF, bricklayers, helpers, cornice setters, trimmers, roofers and those engaged in other occupations not more dangerous; class F, locomotive engineers and firemen, conductors, etc.; class AA is the extra preferred:[1]

	Accident monthly indemnity.	Sick monthly indemnity.	Accidental death.
AA	$60	$40	$600
A	50	50	500
B	40	35	400
C	35	35	300
D	30	30	300
E	25	30	200
F	25	25	200
XX	15	15	100

This class of insurance is certainly the most practicable that is available to American workmen. Theoretically it is the same type of insurance as is offered by voluntary state schemes, though in one or two respects it differs from that, while there are certain weaknesses common to both. In the first place, this is not insurance at cost, while state insurance is intended to be such. The companies which organize and push this grade of insurance are actuated by no philanthropic motives. In the second place, state voluntary insurance lacks the progressive spirit which is necessary to extend its benefits to all of the needy classes, and which necessarily attaches itself to the enterprise of a private business. Both lack, however, the means of furnishing insurance at the lowest possible prices. So long as any such scheme as this must be carried to individual workmen and be forced upon them by argumentative methods, the expenses incurred must be great. The state organization is unable to extend its benefits beyond the most limited number, while the private company can do so only at very great expense. Commissions to agents must be high to spur them on to greater efforts against competing companies. The cost of collecting premiums also represents no small sum. The ratio of losses paid to premiums received for industrial accident insurance in the United States for the year 1903 was 27.9;[2] the same figure for ordinary life insurance was 50.4. Other things being equal

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[1] For monthly premiums of $1.00, the General Accident Insurance Company of Philadelphia pays the following benefits:

[2] See foot note, p. 25 of this chapter.

(e. g., cost of administration, and profits to stockholders), it is fair to assume that the difference in these figures is due to the greater cost of soliciting and collecting in the former case.

Labor in the United States is certainly to be congratulated for the success with which its efforts to provide for itself compensation for industrial accidents have met. But there are serious defects in all of the schemes adopted and put into operation, which are due to their very nature. Being voluntary, none of them protects absolutely the less fortunate worker, who is already so heavily overburdened as to be unable to devote any of his earnings to trade union, fraternal or insurance benefits. This class is one which to be effectually assisted must have relief forced upon it, rather than to be allowed free and voluntary action.

II. RELIEF BY EMPLOYERS.

There is a most woeful lack of concerted action on the part of employers in their endeavors to relieve their employes from the unfortunate straits into which they are oftentimes cast. No employer can be so utterly regardless of the welfare of the men who work for and under him as to have no feeling of sympathy for them when they are overtaken by adversity, and few can be found who do not in some manner or other try to lend their assistance in cases of need. Other considerations, by no means negligible but on the contrary most important, impel employers to expend time and money for their employes in matters far removed from the question of wages. A show of interest in his men on the part of an employer, be he an individual or a corporation, is often productive of increased energy, care, and loyalty to their establishment on the part of those who might otherwise bear the opposite, or an indifferent attitude. Then again, without attempting gross abuse, by winning the good wishes of employes, employers are able to avoid the litigation which is but one manifestation of industrial warfare.

Very little system has been employed by masters to relieve the sufferings and losses occasioned by industrial accidents. In large industrial centers philanthropic institutions are carried on which endeavor to relieve acute distress and afford relief in worthy cases, and these are supported in great measure by contributions from employers. Of individual efforts in this direction, the employment of a company's surgeon who gives free and prompt medical attendance of the highest grade, is one of the most characteristic examples. A great number of manufacturing establishments and practically all the railroads retain on their pay-rolls physicians who are expected to devote a certain part of their time to attendance upon company cases. This service is invaluable to the average injured employe, who is totally unable to engage the services of competent practitioners, and must rely upon the scum of the profession or upon charity for this service. Free medical treatment is a great and highly appreciated boon to those to whom it is afforded.

Many industrial establishments have endowed beds in first class hospitals which are reserved for the use of their injured and sick employes. The best of care during inability to work is thus assured victims of accidents. Other and larger corporations have their own hospitals, in which injured men are cared for free of charge. Though subject to many grave abuses, these efforts are noteworthy and commendable, and even if just pecuniary deserts are often withheld from injured men, because they have accepted such relief, it may be that in the long run labor is better off with the certainty of proper treatment in case of accident than with the uncertainty of receiving sums of money, which in no few cases have a most demoralizing effect upon the recipients.

Many employers make it a point to provide permanently injured employes with work of a character suitable to their lessened abilities. Towermen and switchmen on the railroads are recruited to a great extent from the vast number of injured, but not totally disabled, employes. This is a form of aid which combines self help with philanthropy and which is most to be encouraged. Difficult as it is for the able bodied man thrown out of employment late in life, it is even more difficult for a young and partially crippled man to find a situation whereby he can contribute partially, if not entirely, to his support. It is also the custom with many employers to continue for some length of time the wages, in whole or in part, of injured employes.

Numerous instances might be cited of the charitable work of employers expended upon the families of totally disabled or killed employes. Gifts of money, fuel, goods, etc., are by no means uncommon.

The forms of relief by employers so far mentioned, though to some extent actuated by selfish motives, are in the main prompted by charitable and kindly instincts. Relief of a totally different nature is practiced by many employers to whom the risk of accident is so great as to make civil liability for damages resulting therefrom a thing to be feared and especially to be avoided. Particularly in connection with liability insurance, policies are taken out which collectively insure the individual workmen in an establishment, in some measure as does ordinary industrial accident insurance, except that the acceptance of relief under these policies becomes a bar to further recovery from the employer. For two alternatives are offered the injured man: He may elect to bring civil action under the common law, or he may decide to accept the insurance money offered him, only, however, on the condition that he affix his signature to the release paper prepared by the employer. In the case where the employer defrays the entire expense of this collective insurance, no injustice is done the injured man to compel him to sign the release before receiving compensation; the process constitutes a method by which the employer meets his legal liabilities. But on the ground that he is bestowing upon them a great benefit, an employer often persuades his men to allow him to deduct from their wages small amounts sufficient to defray in part, or entirely, the expense of their insurance; sometimes deductions are made without either the knowledge or consent of the insured. The injustice of considering and holding the receiving of benefits under such a policy a bar to civil recovery is manifest; where employes pay for any portion of their insurance their enjoyment of benefits accruing thereunder should in no way be restricted.

It is not contended that employers are entirely to blame for instituting and urging such schemes upon their men. Workmen's collective insurance affords additional relief from the uncertainties of the employers' liability law, which employers cannot be condemned for desiring to avoid. Many employers have made it well worth while for their men to avail themselves of the benefits of this form of insurance. The Illinois Central Railroad has made arrangements with a strong accident insurance company whereby its employes are allowed the most favorable rates. The Chicago & Alton Railroad Company has obtained for its employes most favored rates from the Aetna Life Insurance Company, and in addition pays 50% of the premiums of those in the more dangerous and 30% in the less dangerous pursuits. Numerous other instances of this sort might be cited, as for example the custom prevailing in the precious metal mines and smelters of Colorada and Idaho of deducting $1.00 per month from wages to pay for collective insurance, but however worthy may have been the intentions of their originators they operate an injustice if the acceptance of relief in any way bars the injured man from his right of action at law.

A still further abuse is possible with the use of collective insurance. Let it be supposed that in a particular establishment liability insurance costs $1.00 per $100 of wages, and that liability and collective insurance together cost $1.87; in this case the lessened civil liability of the employer occasioned by the collective insurance reduces the cost of liability insurance to $.50, leaving as the cost of the collective insurance $1.37. If of the total amount the employer pays $1.00 he is no gainer by the operation; but if he deducts from the wages of his men $1.00 he gains thereby $.13 in the cost of his insurance.[1] It is also permitted the employer to deduct 5% of premiums for the collection of the same.

On account of the vicious features with which the selfishness and greed of employers characterize it and the lack of a concerted plan, relief by employers is extremely unsatisfactory. In other lines of betterment work, employers have done much to improve the conditions of employment, and purely on their own initiative have inaugurated schemes for the aesthetic enlightenment of employers which are a credit to the American people. In the line of compensation for accidents, however, little positive good has been done by employers.

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[1] See Minnesota Bureau of Labor Statistics, 3rd Biennial, 1891-1892, "Trade Union Insurance," Chap. IV, "The Financial Loss to Workmen by Accident."

III. RELIEF CONDUCTED BY BOTH EMPLOYERS AND EMPLOYES.

Three considerations have induced employers to co-operate with their employes in the organization and administration of permanent relief funds: (1) The desire to substitute a certain expense for an uncertain liability; (2) the desire to assist employes in the hour of their distress; (3) the desire to create a positive moral influence on employes which shall bear fruit in their greater feeling of responsibility for themselves and for their employer's interests. For the opinion is variously held that compensation, no part of which is contributed by employes, tends to an increase of carelessness and disregard of the means of avoiding danger. These funds are raised and maintained by contributions of employers and of employes, bearing a definite ratio each to each and in general are administered under the supervision of advisory boards of control composed of representatives of both parties. The effectiveness of these schemes over those that involve impromptu collections as occasion demands is apparent.

In England and on the Continent this form of relief has been quite widely adopted. The contracting out clause of the British Workmen's Compensation Act called forth many such schemes, although practically all the railroad systems had in operation for several years relief departments organized on this basis. The London, Brighton & South Coast Railway Company, Railway Servants' Insurance against Accidents is typical of the English mutual scheme of compensation. Of the 13,506 employes of the road on June 30, 1899, 11,233 were insured under the scheme. Following are the figures of operation during its first year, June 30, 1898-June 30, 1899:[1]

I. RECEIPTS.

Amount on hand at beginning of year	
Contributions of employers	$12,00 79
Contributions of workmen	13,232 01
Other receipts	
Total	$25,232 80

II. EXPENDITURES.

Death benefits	$9,061 42
Incapacity benefits	15,996 19
Other benefits	175 19
Expenses of management (borne by company)	
Amount on hand at end of year	
Total	$25,232 80

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[1] Bulletin of Labor, No. 32, pp. 108, 109, 110.

III. DEATH AND INCAPACITY BENEFITS.

(a) Cases Where Incapacity Resulted from Injury.

Classified Duration of Incapacity.	Number of cases.	Duration of Incapacity		Amount paid.
		Weeks.	Days.	
2 weeks or less	410	551	4	$2,501 38
Over 2 weeks, less than 4	310	903	....	4,160 86
Over 4 weeks, less than 6	102	496	5	2,355 39
Over 6 weeks, less than 8	6)	428	3	1,975 80
Over 8 weeks, less than 10	31	277	3	1,265 29
Over 10 weeks, less than 13	19	217	2	1,051 16
Over 13 weeks, less than 26	22	381	4	1,771 41
Over 26 weeks	6	182	3	914 90
Total	960	3,439	....	$15,996 19

(b) Cases Where Death Resulted from Injury.

Class of Cases as Regards Dependents.	Number of cases.	Number and Relation of Dependents.				Amount Paid.
		Widows.	Children	Parents.	Others	
Where dependents are left	9	5	14	5	....	$8,029 78
Where no dependents are left	1	....	....	....	....	851 64
Total	10	5	14	5	....	$9,061 42

The ratio of contributions to this fund is seen to be practically as one is to one. The expenses of management are borne by the company as is the custom in virtually all of these schemes.

The French railroads maintain similar funds contributed to by the companies as well as by employes. Expenses of management are borne by the companies, and contributions are in the following proportions:[1]

Companies.	Combinations Measured in Per Cent. of Wages.		
	Employes.	Company.	Total.
P. L. M.	4	4	8
Nord	3	variable	....
Est	3	8	11
Ouest	4	5	8
Midi	3	6.3	9.3
Etat	5	5	10
Orleans	....	10	10

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[1] Willoughby, F. W., "Workingmen's Insurance," p. 152.

In connection with this table it is particularly interesting to note the relatively high cost of insurance.

In the United States, several large railway companies have instituted permanent relief funds under the management of Relief Departments, which represent the largest and most systematic efforts of American employers to assist employes in obtaining compensation for accidents. The Baltimore & Ohio Employes' Relief Association was organized in 1880, but upon the revocation of its charter by the State of Maryland in 1887 its work was given into the hands of the Baltimore & Ohio Railroad Company Relief Department, where it has since remained. The Pennsylvania Railroad Company formed a relief department in 1886; the Chicago, Burlington & Quincy, in 1889; the Philadelphia & Reading Relief Association was organized in 1888; the Pennsylvania Lines West of Pittsburg and Erie established a similar department in 1889; and the Plant System Relief and Hospital Department came into existence in 1896. Similar projects have since been undertaken by other railroads, though not on the scale established by these.

Membership in the relief departments of the Burlington road, the Pennsylvania lines, and the Pennsylvania line West is voluntary; in those of the other three roads it is compulsory for all employes. In most cases, the general manager of the road is president of an advisory board composed of an equal number of representatives of the railroad and of the insured employes. The work of administration is in the hands of a superintendent employed by the company, which bears all the expenses of administration. In addition to maintaining the department as a part of the service of the company, the company lends it every assistance in its power, handles in trust all the monies of the department, and guarantees the fulfillment of its obligations.

Contributions to and compensation from the relief funds are arranged in accordance to the ages and monthly wages of the individual subscribers. The ordinary wage classification is as follows: 1st, or class A, less than $35.00; 2nd, or class B, between $35.00 and $55.00; 3rd, class C, between $55.00 and $75.00; 4th, or class D, between $75.00 and $95.00; 5th, or class E, above $95.00. In the Baltimore & Ohio and Plant

System department the points of division are $35.00, $50.00, $75.00, and $100.00. These departments also separate their members into two general divisions as well, the first of which includes all those engaged in the actual process of transportation and the second, all other employes. In all of these relief departments a member may enter a higher class than that to which his wages entitle him, provided that he is not over 45 years of age (50 in the case of the Baltimore & Ohio and Plant System) and has been continuously in the company's service for five years. Additional death benefits may be subscribed for by any member not over 60 years of age, premiums on which are based on the age of the applicant as well as his wages.

Contributions are monthly in advance and are deducted from the pay-rolls. In the Burlington Relief Department contributions are: 1st class, 75 cents per month; 2nd class, $1.50; 3rd class, $2.25; 4th class, $3.00; 5th class, $3.75. The monthly rate of contribution for each extra accident death benefit is in the first class 15 cents. For each additional death benefit of the first class, contributions are determined according to the age of the insured; for a member not over 45 years of age, 30 cents, over 45 and less than 60, 45 cents; and over 60 years of age, 60 cents. The following table exhibits the amounts of the contributions and benefits of the several classes of the Philadelphia & Reading Relief Association.

CONTRIBUTIONS AND BENEFITS.

	1st class.	2d class.	3rd class.	4th class.	5th class.
Highest monthly pay	$35 00	$55 00	$75 00	$95 00	over $95 00
Contributions per month: Class	75	1 50	2 25	3 00	3 75
Additional death benefit equal to death benefit of class:					
Not over 45 years of age	30	60	90	1 20	1 50
Over 45 years of age and not over 60	45	90	1 35	1 80	2 25
Over 60 years of age	60	1 20	1 80	2 40	3 00
Disablement benefits per day, including Sundays and holidays:					
Accident, for fifty-two weeks	50	1 00	1 50	2 00	2 50
Sickness, after first seven days, and not longer than fifty-two weeks	40	80	1 20	1 60	2 00
Death benefits: For class	250 00	500 00	750 00	1,000 00	1,250 00
Additional payment from surplus fund	100 00	100 00	100 00	100 00	100 00
Additional death benefits that may be taken	250 00	500 00	750 00	1,000 00	1,250 00

The contributions to and benefits from the Pennsylvania Railroad Voluntary Relief Department are the same in every particular, with the exception that a benefit equaling one-half of that paid during the first 52 weeks of disablement due to accident is paid after this period until complete recovery. Contributions to the relief department of the Baltimore & Ohio Railroad Company range for the two divisions, respectively, from $1.00 and 75c to $5.00 and $3.75.

In three of the relief departments, membership is entirely lost by the employe who is discharged or otherwise severs his connection with the company. The department of the Burlington road, Baltimore & Ohio, and Plant System permit their members to continue subscriptions to the minimum death benefit. The acceptance of benefits from any of the relief departments constitutes, by agreement in the application for membership, an absolute release of all claims for damages against the company.[1] Statutes have been enacted in several states nullifying such specific contracts, however.

The expense to the companies of maintaining these departments, while probably not approximating the amount of liability incurred by them through accidents to employes, is no mean sum. Aside from the actual cash payments on account of deficiencies and other liabilities, the salaries of officials, medical examiners, clerks, etc., and the expense of stationery, printing, postage, office supplies and maintenance, and the time of officials in other departments, as the law department, represent an outlay of money by no means small. The cost to the Chicago, Burlington & Quincy Railroad Company for the establishment of its relief department and maintenance and operation from 1889 to 1903 was as follows:[2]

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[1] "And I agree that the acceptance of benefits from the said Relief Fund for injury or death shall operate as a release of all claims for damages against said company, arising from such injury or death, which could be made by or through me, and that I or my legal representatives will execute such further instrument as may be necessary formally to evidence such acquittance."—From Application for Membership in Pennsylvania Railroad Voluntary Relief Department.

[2] "The contributions of the members to the end of 1903 amounted to $4,197,912.42, and it is fair to say that the company has, in cash and facilities, contributed an equal amount in operating and maintaining the Relief Department."—15th Annual Report of the Relief Department, C., B. & Q. R. R. Co.

Expenses of establishing and operating, 1889-1902	$752,020 82
Operating expenses, 1903	71,386 16
Total operating expenses, 1889-1903	$823,406 98
Deficiencies paid	42,532 94
Total cash payment by railway company	$865,939 92

The expenses of operating the Relief Association of the Philadelphia & Reading Railway Company for the year ending November 30, 1903, were $33,658.40, of which amount $17,471.89 was paid by the company, and the remainder, representing salaries and expenses of the medical corps, was deducted from the relief fund. In addition to this amount, $12,995.02 were contributed by the company to the fund, being 5% of the contributions of employes.

The benefits actually paid by these departments aggregate several million dollars annually. On account of the large number of accidents of minor importance treated, the average per case is surprisingly small. The fifteenth annual report of the Baltimore & Ohio Relief Department shows the following aggregate and average of relief benefits paid from the organization of the first Relief Association up to June 30, 1903.

	Number of payments.	Cost.	Average per payment.
Deaths from accidents on duty	1,198	$1,915,240	$1,065
Deaths from other causes	3,698	1,866,064	504
Disablements from injuries received in discharge of duty	119,445	1,468,259	12
Surgical expenses	79,484	241,456	3
Disablements from sickness and causes other than above	150,589	2,257,336	15
Aggregate	355,014	$7,748,357	$22
Disbursements for expenses	....	1,683,848	....
Total disbursements for all purposes	....	$9,432,256	....

It is readily seen that the great numbers receiving benefits for disablement and sickness are responsible for the low average obtained.

IV. RELATIVE ADVANTAGES.

In general it may be said of relief conducted by employes that it lacks the unity and reliability requisite for an all-embracing and all-effective scheme of compensation. Of whatever form it may be, it does not of necessity embrace in its benefits all those who are in need of the assistance offered. Trade union benefits are open only to members of the unions which manage them; fraternal orders are accustomed to recruit their members from the middle class of intelligent and fairly well-to-do citizens; accident insurance in regular companies is too expensive to be open to the mass of laborers, and the industrial form, though seemingly most practicable, must seek out individuals, which in a country, supporting close on to twenty millions of workmen is a difficult task. At the same time, representing, as it does, the individual and collective efforts of labor to provide for its own needs unaided, voluntary relief by employes is a type of compensation peculiarly adapted to the customs and traditions of freedom-loving American people.

Viewed from the financial standpoint, relief by employes is unsatisfactory in the amounts of relief, and is open to grave administrative abuses, which the absence of controlling influences by reliable outside parties makes possible. Accident insurance in regular companies, being controlled by special state laws, is thoroughly reliable and guarantees the payment of benefits satisfactory and equitable in amount. Union benefit funds, being unincorporated, are open to the depredations which unprincipled management is liable at any time to make. Nor do the amounts actually paid bear a fair proportion to the loss occasioned by death and incapacity. With the exception of the railroad brotherhood death benefits, union benefits are little more than sufficient to defray burial expenses in case of death, and in case of temporary disability are expected only to ward off actual privation.

Viewed in the light of a system of compensation, relief by employers is not worthy of consideration. The possibility of fradulent purposes and the utter unreasonableness of the benefits offered forbid that labor should maintain confidence even in the permanent local schemes often inaugurated. It may be said that from an ethical and sociological standpoint labor is justified in demanding as a right relief from its employers, but the moral laws which govern the relations of man with his fellow-men are not sufficiently understood to insure the maximum of fair play on the part of independent employers in their treatment of dependent employes.

Relief conducted jointly by employers and employes enjoys some advantages which no other form can possess. Whereas relief by employes is the surest type to secure the interest and care of workmen in the prevention of accidents and the elimination of the need of relief funds; whereas relief by employers is the best guarantee of the adoption and enforcement of all reasonable preventive measures; relief by employes and employers combines these desirable qualities in a ratio depending only on the proportion of interest which each feels in the established funds. As organized in the United States, these relief funds afford reasonable compensation for accidental injuries and deaths, and being supported by reliable industrial institutions posses all the necessary stability.

These mutual benefit schemes have a far greater significance in the economic world than their relation to the problem of compensation alone indicates. The joint action of representatives of employers and of employes in any peaceful cause is productive of a better understanding between these factors in the production and distribution of material goods. To the public at large, this mutual understanding means greater efficiency of service rendered by all institutions of a public nature; to the employer it means a cessation of strikes and damage suits, and a consequent increase in the net returns of his business; to the employe it means more regular and certain employment and the certainty of care when overtaken by disaster.

The position of the workman, who has sustained injuries of such a nature as to entitle him to compensation under the law of employers' liability, when he is the recipient of relief of the nature first discussed above, is different from what it is when he is depending for relief on funds to which the employer has contributed. In the latter case, he must often choose from which of the two sources of compensation he will receive his compensation. The certain indemnification afforded by permanent relief funds is accompanied by a release from common law or statutory liability, while acceptance of relief from funds instituted by employes is no bar to possible recovery by legal process of a sum far in excess of the maximum benefits afforded under the other scheme. It would seem, however, that the supremacy of the welfare of the mass over that of the individual in a minority of cases would argue for the preferment of the certain small relief, though it be a bar to the uncertain recovery of a large amount. This is particularly evident in consideration of the fact that less than 50% of the accidents that actually occur are deserving of compensation under the fellow-servant and assumption of risk doctrines of the employers' liability law.

CHAPTER V.

THE PRINCIPAL REQUISITES OF A PROPER SCHEME OF COMPENSATION.

In the preceding chapters consideration has turned: (1) to a review of the salient features of the common law of employers' liability and its chief statutory amendments, both in the United States and in England; (2) to a discussion of the Evils attendant upon the operation of the law of employers' liability, and some devices calculated to remedy them; (3) to a brief outline of the several schemes of compensation employed in the United States and in Europe, and classified in general as state compensation, compulsory and voluntary, and (4) voluntary relief of a private nature. Without going to any extent into detail, it has been seen that all of the schemes so far put into practice have been characterized by some good and by some bad features. Though it has not been shown, since it is rather foreign to the practical considerations of this paper and is of incidental rather than of essential importance to the current discussion, that the problem of compensation for industrial accidents must be considered in the light of sociological development as well as of economic reasoning and that any plan advocated for the betterment of conditions in this particular line must be guided not only by the industrial status of the working population but even as much by the ethical and moral effect of that plan upon those whom it is the desire to relief—though, I repeat, this thought has not been developed, it must necessarily, and on the face of it, be granted: it suggests in itself the great end to be attained by all movements seeking to reach the material betterment of the toiling masses. It is the purpose of this chapter to determine the principal requisites of that scheme of compensation which will prove most applicable to the needs and condition of labor in the United States.

It is necessary to keep continually before the mind the fact that this problem is one of importance and one that affects, though with unequal force, all classes of society. It must be remembered that a constant drain is being made on the working strength of the nation, weakening particularly that branch of the population actually engaged in the pursuits which make this civilization possible, and who are little able to bear, unaided, the direct effects of this sapping of the industrial power of the country. Many states of the Union have set a value on the life of individuals. Consider this value to be $5,000, allow a proportional sum for the partial loss of life which a disabling injury occasions, and it can be computed that the annual accident loss to the people of the United States represented in money values is in excess of $150,000,000.[1] But this is considering the results of accident only on the cold, hard basis of financial loss; an educated and highly civilized people has regard for other and finer interests of its individual members, which will not permit of their being reduced to the ignominy of representation in dollars and cents. Physical and mental suffering are as great considerations in this day of intellectual, artistic and aesthetic development as the problems of accumulating wealth, and the vast expenditures constantly being devoted to the advancement of philanthropic and semi-philanthropic institutions of every sort is an evidence of the desire on the part of those who best know the advantages of this state of civilization to extend them to their less fortunate brethren. Let it not be forgotten, finally, that this is a work which has for its object the increasing of the happiness of the nation.

It is necessary now to determine what must be the standpoint taken in their efforts to remedy existing conditions by those who appreciate the evils and are desirous of effecting a betterment. Evidently, there can be but one, satisfactory to all the interests concerned, that of justice. A system of compensation builded on any other foundation would prove fruitless, for it would not only add to the difficulties of its practical operation but would create new conditions as bad in themselves as those at present dominating. It is not sufficient that employers make concessions to their workmen with philanthropic motives, or others which have behind them ulterior purposes of different intent; if a system of compensation be based on the generosity of its founders it will have only a repelling effect on the majority of the working population, and a degrading effect on those who, for want of a more agreeable method, are obliged to avail themselves of its opportunities. The enterprise and initiative of the American people can in no way more quickly be destroyed than by submitting the laboring classes to an institution of a charitable nature. If he be forced into a position wherein be becomes an object of charitable and philanthropic efforts, the American workman fast loses the self-respect, which is in a great measure to be credited with the advanced position in which he finds himself today; extend to him privileges, and at the same time make him feel that they are his to enjoy by all the rights of justice, and if he be not unreasonable he must grasp them willingly.

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[1] Minnesota Bureau of Labor Statistics, 3rd Biennial Report, p. 117.

From the standpoint, then, of justice—of justice to the workman, the employer and the general public— it must first be considered by whom the accident burden of the country should be borne. It has already been seen that the annual loss due to accidents is an enormous one. Of what nature is this loss, or burden, which so regularly falls upon society?

The labor problem as generally understood deals with the distribution of the material products of industry between the two important factors, the employer and the laborer, which contribute to the success of industry. The shares of these two claimants to the products of industry are not fixed, but tend to fluctuations more or less extreme and determined by a variety of causes. Whatever adds to the total production of industry tends to increase the profits of the employer and the wages of the employe; whatever deducts from this product decreases the shares to be received by the one or the other. One of these causes which affect directly these two contending claimants of the product of industry is the cost of accidents. The national accident loss is a negative product of industry, so to speak, and hence the problem of compensation becomes quite properly a distributive one. But is it necessary that this product of industry be distributed between these two parties alone? An alternative seems to present itself. As a particular charge upon industry it is not unreasonable to throw this burden off upon the consuming public in the shape of increased prices of commodities. Thus it is clear that three distinct parties remain to share in this negative product of industry: (1) the employer; (2) the laborer and wage earner; (3) society, or the consuming public. Upon which of the three, in perfect justice, should the burden be made to fall? This question can only be determined upon two considerations: (1) which of the three profits the most by the conduct of industry; (2) which is best able to bear the accident loss occasioned thereby. If it be determined that labor is the principal gainer from the condition of modern industry, it may not be concluded that labor should indemnify itself, unless it be also shown that labor is best able to bear the expense of indemnification. If capital, as represented by the employer, is found to be the better able to repay labor for its losses, it must not be hastily concluded that the necessary amounts for compensation should be taken from the employer's profits, unless it be also shown that capital is the chief gainer.

Before endeavoring to determine on whom the burden of compensation should be made to fall, it is well to know to whom compensation should be made due, in order that the strength and ability of those to whom the scheme of compensation shall apply may be judged of. In Europe, legislation has had almost entirely to deal with those workmen whose annual wage receipts are equal to, or less than, a certain amount. Germany fixes that point at $476.00; England bases the highest awards on an annual wage of $487.00. Limiting the scope of the law to such employments as in which wages do not rise above a certain point presupposes the unquestioned ability of men occupying higher positions to care for themselves. The corollary of this proposition is that higher grades of employment represent higher grades of intelligence on the part of those filling them, and their natural willingness to provide for themselves in all cases wherein their knowledge instructs them. In addition, competition for the higher employments is not so keen. The business man, and the professional man, realize the advantages of life insurance and protect themselves and their families accordingly. The unskilled laborer and the skilled mechanic may be aware of the advantages which insurance offers but the expense is too great for them. Somewhere in between is a line above which wages will allow a comfortable living and the laying aside of funds for future use; below which the entire amount is necessary to maintain the accustomed standard of living, or at least is insufficient to furnish a residuum, over and above the necessary expenses, large enough to permit participation in such a scheme as ordinary commercial insurance involves. It may not be said that the man who earns $450 or $600 a year is in the latter class, while he who earns $750 or $900 is in the former. Statistics of poverty and wealth in the United States do not permit the establishment of a hard and fixed rule at this time. Suffice it to say, however, that the problem of compensation deals with those, and only those, who through poverty or ignorance, or both, are disqualified to make that provision for the future which common justice demands for themselves, their families and society in general. The principal regard is for the unskilled labor which vacillates from place to place, and often from industry to industry.

Recurring now to the consideration as to which party is best able to bear the loss occasioned by accidents, it is manifest that labor is totally devoid of resources with which to meet such a constant drain. The mere fact that the problem of compensation deals with the financially dependent naturally forbids the ability of labor to pay for accident indemnification. This does not of necessity, however, prove that employers should assume the burden and responsibility. Accidents are the necessary accompaniments of modern industry; of this there is no doubt.

On what persons, and on what class of persons, does industry shower its benefits in greatest measure? The progress of civilization during the past century has been unequalled in the history of man, and industrial development is at the bottom of the whole movement. It is not possible to say that any one class has benefited thereby in a greater measure than any other. The arts, the sciences, educational and aesthetic opportunities are offered to all classes in approximately the same proportion as before. If any one class in particular has benefited, surely that class is labor. Capital is in the reach of more luxury than monarchs dreamed of a century ago, but labor is sharing in the necessities and comforts of life to an extent surpassing even that of the most well-to-do of the middle eighteenth century. The cheapness of food supplies and high wages make the fare of the lowest laborer in the United States by far superior to that of English and other foreign laborers. Cheap transportation, high grade literature at low prices, museums and parks—all these things tend to elevate the life of the laboring man from drudgery. However much employers may have benefited, it is unfair to say that their benefits are enough greater than those of labor to confer upon them the duty of caring for the unfortunate victims of industry. Thus it appears that capital, in as much as it fails to reap the greatest benefits from the progress of industry, although it is better able to assume the burden of compensation, cannot in perfect justice be made to assume it. In a similar manner, though it be granted that labor is the greater gainer from the advances in civilization, the fact of its poverty precludes the justice of shifting to its shoulders the entire burden of providing compensation for industrial accidents.

If, then, neither capital nor labor deserves to bear the burden of compensation, who ought to assume it? The answer is simple: Society as a whole. Society is the greatest gainer from industrial progress, and is best able to bear such a burden, since it represents in the aggregate the strength and welfare of all of its component parts, and thus is the body to which justice points as morally and socially bound to protect labor. The willingness of society to lend assistance to its unfortunate members is to be assumed as soon as mentioned; witness the many deeds of unorganized philanthropy and charity ever being committed! It remains to learn in what way the most easily and the most effectively society may take upon itself this burden. Taxation, direct or indirect, bespeaks too many difficulties to warrant its discussion. A saner and more effective manner of throwing the burden upon the public in such a way as to cause an equitable division of expense is to consider compensation a trade charge or a definite tax on industry, and to distribute it throughout the community in whatever increase of the price of products may be necessary.

Of all commodities of elastic consumption the law of supply and demand is the determinant of the price. Conversely, the price of commodities determines the demand for them which the consuming public creates. Now it is a question open to serious dispute as to the probable effect of adding to the cost of industry even the small increment necessary to provide sums for compensation. The effect might be negligible, especially in the case of non-elastic consumption commodities, which will continue in equal demand though their cost be a trifle higher, and in non-competitive industries. In an industry, however, producing commodities of elastic consumption a rise in prices tends to decrease consumption and to lessen the earning capacity of capital, which is forced into other pursuits. Thus the ability of industry to shift the incidence of any particular tax upon the public is exceedingly difficult to determine until the effort is made. But under an industrial system that tends in its operation towards combination and monopoly, and secured from external competition by the high walls of a protective tariff, it is safe to assume that a tax which approximates on the average 1% of wages, may be absorbed by the public. English employers in 1880, and again in 1897, foresaw dire effects to British industry as a result of the increased burdens placed by Parliament upon industry; German employers were equally alarmed in 1884; neither have found their fears realized in the disruption of domestic or foreign trade, though neither were protected as are employers in the United States by a high tariff. For, when an increase in one industry is accompanied by a similar increase in all others, the relative positions of the different elements which compose industrial society are in no wise affected.

It is as logical and as just to consider the wear and tear on human life a trade charge, even as the wear and tear on machinery. Every employer is obliged to lay aside each year a certain amount to replace the loss occasioned by the depreciation in the value of his plant and appliances. The action of the elements tends to the destruction of his property, and this loss, though no more certain than the loss to labor through accident, is provided for as a necessary expense of conducting industry. Every prudent manufacturer today carries insurance to protect himself against loss by fire, water, burglary, etc.; against the possible occurrence of accidental happenings no more liable to occur than accidents to labor. Is there any reason why an employer should consider the loss in the efficiency of his machinery any more a tax on industry than that of his human labor, which is withal as necessary to the conduct of his business as the former? From the standpoint of justice, the mere fact that his labor supply costs him individually nothing to procure should in no wise relieve him from his responsibility towards it while in his employment. The definite loss occasioned by accident might as well be provided for in advance as that occasioned by the decreasing efficiency of machinery. Considered as certainties and unavoidable quantities the one is of the same nature as the other, and both admit of the same treatment. The consumer pays for depreciation in the material establishment of the employer; let him in the same manner pay for that in the human establishment.

FOUNDATION PRINCIPLES.

Reliability and stability must be urged as the first requisites of that scheme of compensation which will win the confidence of all classes of society. No matter what its general characteristics, it must be of such a nature as to add to its approval by the masses an eagerness to participate in its benefits. Employers must feel that there is present an institution which is no mere temporary experiment, but a real, live and stable fact, established for a definite purpose which it is the determination of its promoters to pursue to a definite conclusion. Employers must be able to feel that here is an organization which offers an honest and strictly valid guarantee of fulfilling its obligations, of whatever sort or degree these may be. No man is willing to venture his time or his money in an undertaking which does not hold forth the promise of success. Success in a scheme of compensation implies the ready and adequate payment for all accidents, which it seeks to indemnify, not only today and tomorrow but continuously, or until a better scheme is evolved. The effect of reliability and stability on the relations existing between labor and capital is not a mere matter of conjecture. A system of compensation which invites and warrants the confidence and trust both of the employing and of the laboring classes will tend greatly to diminish the friction that prevails between them today. The settlement of the question of compensation in a definite and conclusive manner will bring labor and capital to a plane of mutual understanding and mutual interest on at least one controverted point.

The importance of the prevention of accidents has been urged in an earlier portion of this work. Carelessness and laxity in the enforcement of preventive measures result in increasing the number of needless accidents. It is manifestly impossible for employes to provide the necessary safeguards to machinery and appliances; this is the undoubted duty of the employer. But the employer left alone will interest himself in the matter of prevention only in proportion to the degree of loss which he personally sustains. In recognition of this tendency, all civilized industrial communities have taken upon themselves the authority of compelling the adoption of such devices as afford manifestly needed protection from accident, and have in many cases imposed not only a penalty for failure to comply with such regulations which result in accident, but also for failure before accidents occur. This action on the part of the state has been accompanied by the creation of an office, commonly known as that of the Factory Inspector, the duties of which are to superintend the inspection of factories and workshops which come under its supervision and to enforce the provisions of the law.

The English Factory Act of 1895 provides that employers keep a careful record of all accidents, of which the factory inspector of the district must be immediately notified. Their registers must be at all times open to inspection. All accidents must be recorded which cause the loss of five hours' work, or of one of the three working days next succeeding the occurrence of the accident. Failure to comply with the registration provision is punishable by a fine of not more than ten pounds. Employers are obliged to afford inspectors every possible facility for the proper investigation of accidents. Two thousand certifying surgeons are appointed for the entire kingdom, whose duty it is to examine injured workmen as soon as possible after an accident and to report the results to the factory inspector within twenty-four hours. Penalties for failure to comply with preventive regulations are ten pounds or less, when such failure does not result in accident, and up to one hundred pounds when accident occurs.[1]

Effective as is this means of preventing accidents, the employer must in addition bear a civil or social liability for compensation, in order to enlist his greatest efforts in accord with reason in the prevention of accidents. Evasion of factory acts is often not a difficult matter on account of the laxity of inspection. The penalties prescribed for failure to comply may well be risked, if they are the only liabilities which the employer may incur. The personal and humane feeling which an employer always extends towards his men is a guarantee against the most serious abuses; but to insure the greatest degree of precaution it is necessary to add as well the financial interest which civil liability to the injured man or to compensation funds must arouse. Prevention of accidents, then, demands that employers of labor be partly, if not wholly, responsible for the compensation of injuries.

It may be urged that in a country of such wide area as the United States and of such varied industries a general system of compensation is not applicable. In the first place, a system that applies alike to all industries may be beneficial to one, and highly detrimental to another. The anthracite coal industry may have reached a point where the margin of profit is so great as to make possible the indemnification of all accidents without unduly infringing on the returns of any of the component factors in the production of coal; the extreme competition, which threatens at all times to play havoc with railroad companies, may be of such a nature as to make the application of a general system of compensation to railroad employes impracticable. Industries which are spread out over the entire country meet with certain conditions in some parts which are absent in others. Climatic conditions, or the grade of available employes may affect seriously the likelihood of accidents in different parts of the country, whereas the cost of living, which in every case determines the minimum wage received by labor, already tends to make industry in one part of the country unsuccessful in competition with the same industry in another part. The imposition of a heavier burden on the least favorably situated establishment might crush it out of existence.

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[1] See the excellent treatment of the subject of accident prevention in J. Caldor's "The Prevention of Factory Accidents," 1899.

A few words suffice to indicate how futile would be the effort to better conditions by the employment of local and decentralized schemes. Under a theoretically competitive system of industry such as maintains today in the United States the tendency is to compete on the lowest possible plane which will attract the several industrial factors. Below that level industry will not descend, because there it will have no supporters; above that level it cannot ascend on account of the dominant force of competition. That plane to which industry is forced by competition is the one wherein the lowest acceptable returns are made not only to the land-owner and the capitalist but to the employer and the laborer as well. Unless artificially raised, competition always continues on this base, and the endeavor of any individual to elevate the level results in disaster to him. Now, since compensation must inevitably, and in all cases, come from the source of all wealth in its various useful forms—the co-employment of the factors of production which is industry—the granting of compensation must either add to the cost of industry or be taken from the shares of individual factors. If the latter happens, that factor which is deprived of what it considers its lowest acceptable return will withdraw rather than continue with a less measure of gain than it deems just. The result is stagnation of industry. If the former happens in one establishment and not in another, that in which compensation is paid will be forced out of business by competition.

If it be conceded that compensation must and shall be paid, it is necessary that competition be on a higher plane, such as will include not only the shares in distribution of the factors of production, but this new claimant as well. An influence external to the economic theories which govern the distribution of wealth is essential to the accomplishment of this process. Be this influence what it may, only through it is the granting of compensation possible. In respect to individual industries, indemnification must be through the operation of a general scheme for the entire industry, adopted either under the compulsion of outside authorities or by the mutual and voluntary agreement of its component establishments. A system which applies to a certain district, as perhaps to a single state, places at a competitive disadvantage the establishments in that district. It was the fear in England when the extension of the employers' liability was urged twenty-five years ago that the resulting burden on industry would accomplish a weakening of the British power in the competitive markets of the world; German employers feared that compulsory insurance would destroy their foreign trade. That neither of these largest industrial nations has met with the realization of its fears is sufficient proof, other things being equal, that such apprehensions as to international competition are ill-founded in the United States; that both realized the disastrous effect of imposing heavier burdens upon one competition than upon another is evidence of the necessity of adopting a general system of compensation where individuals of one nationality, and not different nations, are the competing factors.

One further consideration argues not alone for a system of compensation general as applicable to particular industries but also as to all industries. There exists today, and there probably always will exist, a class of labor which does not confine itself to steady and continuous employment. This casual class represents in a majority of instances the lowest type of unskilled labor, in as much as regularity tends to increase in the higher grades. The general movement of such casual labor is from establishment to establishment in a particular industry, though the low grade of work which it performs permits a movement ment from industry to industry. It is difficult to provide compensation for laborers who are not attached for any considerable time to a single establishment, since an employer feels less inclined to assist a stray workman who happens to be in his service at the time of an accident; but it is apparent that this class is the one most in need of compensation. The centralized and local schemes of compensation are incapable of dealing with this problem in any effective manner especially such as in which relief is dependent upon contributions to the compensation fund. Trade union benefits are as a rule payable only after a certain period of membership in, and subscription to the funds of, the particular local union. In the relief schemes up to this time organized conjointly by employers and employes, or by employers alone, benefits are customarily given up upon the severance of employment.

As far as the individual employer is concerned, this is no more than just, for he can not be expected to guarantee compensation to a man who works for another. But from the standpoint of the man employed, who in a majority of cases is not vitally to blame for his inability to continue in a single employment, the lack of protection thus brought about is a hardship, in as much as it places a greater premium on the superior intelligence and worth of others. A man is no less deserving of compensation who toils now here now there than he who remains steadfast in one employment: both add their mite to the progress of industry. Until satisfactory proof to the contrary is at hand, it must be considered that both dispose of their labor to the best of their ability. But if the casual laborer does not work continuously he needs—and by the man himself is meant, too, the wife and children dependent upon him—so much more the protection and assistance which it is seen society owes him. Every man should be given credit for doing the best in his ability, but even though it be established that he does not make the most of his opportunities the spirit of the present age will not permit of his being ruthlessly discarded. And, too, this class of labor performs as a rule a class of work which a more intelligent and more capable class would be loathe to undertake. Organization of relief funds along the lines established by individual industries will best provide for casual labor. The workman who disposes of his labor in a single establishment deserves to look to that establishment for his compensation; similarly, he who toils alone in a single industry should receive his assistance from that industry, irrespective of the particular place or places in which he is employed. But to provide for labor which has not spent all its time in single industries a corelation must exist between the compensation schemes of all industries.

It is at various times, and quite reasonably, pointed out that employers' liability laws and workmen's compensation acts operate a great hardship and injustice upon individual employers of smal capital and few servants. Whereas accidents are less apt to occur in small establishments, when they do come they place the employer in a position bordering on bankruptcy. Any jury may find the owner of a small machine shop employing the services of a half dozen men guilty of gross negligence for failure to replace an old emery wheel which has caused the death of an employe by suddenly breaking,and may hold him liable for thousands of dollars in damages. Such an occurrence would prove fatal to the small employer; payment of the judgment would wipe out his entire establishment. Many instances of this sort actually occur in this country, while in England the extension of the compensation laws to cover agricultural labor brought especial attention to the position of the small farmer thereunder. Insurance against liability is, of course, within the reach of this class of employers, but the small margin of profit with which they must always content themselves prevents most of them from accepting this protection, and, too, the insurance companies, while basing premiums on the amount of wages paid by the insured, refuse to accept a policy with a premium under a certain minimum. Thus the employer of a very small number of men has to pay as much for insurance as the one who employs several times as many, though the returns from his investment may be in no proportion to those of the larger employer. Not only does his personal liability in case of accident threaten to swamp the employer, but also the injured employe is never assured of obtaining compensation from him: his total resources may in extreme cases be insufficient to satisfy the demands made upon them. To cover such cases, a general scheme of compensation is alone applicable; small and large establishments must join hands in the mutual undertaking, with the purpose of mutual assistance.

But while it is seen to be necessary that the proper scheme of compensation must be general as far as particular industries are concerned, it does not follow that it must be general for all industries. The application of the same system in all its details to all industries would not meet with complete success. In its general outline it may be the same for all industries, but in the matter of assessments and of benefits the varying nature of different industries requires the adoption of varying scales or schedules. The accidental loss of a leg does not impair materially the efficiency of a man trained to operate with his hands a sewing machine; the same loss to a railroad switchman necessarily excludes him from the further pursuance of his former employment. Thus it appears that a system of compensation which applies with equal and unvarying force to all industries does not meet the requirements of the case; it is, nevertheless, necessary that the adopted system be general for any and every industry. And this is made doubly sure by the fact that the remedy sought is for the entire body of workingmen and not for any particular number or group.

It is hardly necessary, in the light of the operation of employers' liability laws, to dwell at any length upon the two fundamental and basic principles of the contemplated scheme of compensation. Experience has shown that the only true method of dealing with the problem is by insurance, payable on the proof of the occurrence of accident. Both add to the certainty of indemnification and both are indispensable to the adequate and satisfactory solution of the difficulty. The application of scientific and systematic methods to any problem of complexity decreases the amount of wasted energy and adds to the certainty of results; and insurance is a true science. But the application of insurance principles has not been sufficient to render satisfaction in the cases where it has been tried, as long as any doubt existed as to the accidents for which compensation is payable. Insurance, then, for all injuries due to accident received in the course of employment, save alone those due to the gross and intentional negligence of the injured man, must be the basis of the only scheme of compensation applicable to needs in the United States.

ORGANIZATION.

Neither compulsory or voluntary state insurance is possible in the United States. The traditional abhorance of all that savors of compulsion is so deep-seated in the American mind as to effectually block any move in the former direction. As at present understood and interpreted the government of the Union has neither constitutional nor implied powers to interfere with the civil rights of the citizens of the several states. The government of the United States is a dual one, so great is the integration of its state and federal parts.[1] The authority of the federal government is delegated by the states of the Union, and is consequently clearly marked and seems great by enumeration. But the residuum of power that is left to the states takes on a greater air of importance after a moment's consideration. All the powers of the general government are such as affect interests which it would be impossible to regulate harmoniously by any scheme of separate state action, and only such: all other powers remain with the states. Their jurisdiction extends over the entire range of the civil and religious rights of their citizens, over all social and business relationships, and establishes the foundation of law and order. The individual states determine the power of masters over servants, and the entire law of principal and agent. In their hands lies the constitution of all corporations, private and municipal, such as do not especially fulfill the financial or other specific functions of the federal government.

In as much, then, as the problem of compensation is a social one, that affects as well the rights of all citizens, jurisdiction over its treatment is vested in the state governments. Only by the specific delegation of such particular authority to the federal government could it assume for itself the prerogative of attempting the organization of a remedy for the existing difficulty. Voluntary federal insurance is thus manifestly unfeasible. Though the several state authorities, however, might presume to attempt the solving of the problem by the inauguration of insurance schemes the difficulty of obtaining absolute uniformity in a matter which concerns the industry of the entire country would render such efforts ineffectual.

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[1] See Woodrow Wilson, "The State," pp. 468-474.

Whatever the organization of a proper scheme of insurance against accidents, it must in the first instance be independent of any active state interference. Direction might well be given such a scheme by the able advice based on the high intelligence of the Federal Bureau of Labor and the many state departments of labor and labor statistics. It would certainly appear that this problem offers an excellent field for the activities of these institutions, organized in the interests of the working classes and managed by eminent authorities on the subject of labor conditions and their betterment. The direct and indirect aid which the Bureau of Labor might lend the organization of a general scheme of insurance would prove invaluable. In the collection of accident statistics it should have the greatest facilities for obtaining the best results. Suggestions of practical value are the products of such an institution, and by turning the attention of its creation to such a matter the federal government has it in its power to exercise a positive benefit to the national prosperity, though without the constitutional power to undertake itself the solution of this problem.[1]

The extension of government privileges to compensation schemes, examples of which are found in Germany and Italy, suggests another method of indirect and constitutional assistance. The use of post-office facilities and franking, and the establishment of branch offices in local postal stations would effect a large saving to an insurance scheme, which would represent a small outlay on the part of the government. In various other ways the kindly and helpful attitude of the government towards a system of compensation might suggest and afford privileges of no small account to an institution largely public-spirited in its intent and purpose. It may be found that a form of guarantee based on the principles of subsidization might be obtained from the government for an institution which has for its object a matter of such vital importance to national progress and prosperity.

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[1] In the recent message to congress, President Roosevelt recommended strict employers' liability laws wherever the government has power and "that the congress appoint a commission to make a comprehensive study of employers' liability with the view of extending the provisions of a great and constitutional law to all employments within the scope of federal power."

Of the three types of voluntary organization possible, that which involves a maximum of interest and responsibility on the part of the employer is manifestly the most effective. Relief organizations in the United States supported alone by laborers have never proven adequate to the needs of that class which most requires assistance. Relief by a third party, and one disinterested in the actual process of industry, has numerous disadvantages, which are only too well displayed in the failure of the National Bank of Italy to accomplish the good expected of it. Compensation funds organized by the serious action of employers have advantages which neither of the other schemes possess. In the first place, be it granted that the cost of compensation should be considered a trade charge, it must be admitted that on the employer, and on the employer alone, rests in the first instance the duty of providing the means and source of indemnification. In the second place, prevention of accidents demands that employers have a personal interest in the creation of funds for compensation purposes.

Such is the nature of the problem of compensation that the voluntary participation of the lowest grades of labor in an established scheme, which involves any expense or action on their part,is not accomplished without great effort on the part of other interested persons. A suitable organization, then, must be of a sort which will compel the participation of these classes in its benefits. To accomplish this end, relief schemes inaugurated and managed by employes and those established by disinterested parties are found wanting. The employer is the only person possessing the ability to make certain compensation for every accident to every employe injured. On account of his peculiar relation to his employes he is in a position to know not only of the occurrence of an accident but as well of the numbers and personages of the injured. If it is insisted that every person meeting with accident in the course of his employment should receive compensation, it must be conceded that the employer should undertake the organization and administration of the requisite funds.

It has been seen that in all due justice and reasonableness the cost of compensation should be considered a trade charge and accordingly should be borne by employers. But this principle is subject to one modification important to note and to insist upon. Just as it is to the interest of the public that the employer feel a personal interest in the raising and administration of funds, even so is it desirable that the employe be made to contribute to them in order that he may exercise not only that caution which the fear of physical suffering excites but also the care which a financial interest involves. Employers urge that free compensation makes the average workman quite disregardful of the precautions necessary to insure safety from accident. It is the belief in England that the Workmen's Compensation Acts have led to an increase in the carelessness of employes, especially when they find that their total accident indemnification may exceed their regular wages. Though quicker and more agile in his actions than the German workman, the American laborer is careless to a degree possible only among a people who eagerly sacrifice every precaution to the saving of time. Employes will disregard the most obvious rules of safety, but are they any more risking of their lives than others who encounter dangers in their every move? One need but watch the throngs on a crowded metropolitan thoroughfare or the passengers alighting from or boarding moving street or steam railway cars to understand that trait in the American make-up, which seemingly causes the average citizen to look upon danger with the greatest scorn. It is an offense punishable by fine to step from or on a moving train in Germany, and every energy of the police and railroad authorities is exerted to enforce the law. But the American is always willing to "take a chance" even though no apparent advantage is gained thereby. This feeling bespeaks the ultra-optimistic spirit of our nationality which it is not wise to discourage. But at the same time a scheme which contemplates the indemnification of accidents due to this feeling can ill afford to encourage by any means, ever so little, the recklessness of the American workman.

The most logical form of organization is by and through associations of employers, acting together for the specific insurance of workmen against accidents. German employers' associations are the best type of these institutions and may well be followed closely in this country. These associations are centralized to a great degree, but at the same time leave enough latitude to individual employers to maintain their positive interest. Not only are individual employers constrained to guard strictly against accidents in their own establishments but their mutual relations with respect to the insurance fund will be of such a nature as to force the weaker and more lax employers to live up to the regulations of the association. By assigning to each establishment an index-number, or co-efficient of risks, a constant effort will be made to reduce the number and severity of accidents in order that contributions to the fund may be diminished.

Representation in the employers' associations, must be accorded the insured employers, in recognition of their contributions to the insurance funds and of their natural interest in institutions which affect so materially their welfare. The effect of the direct intercourse between employers and employes in such a venture as this would without doubt be reflected throughout their entire relations with one another. A better understanding, each of each, would eliminate to a great extent the feelings of distrust so often expressed under present arrangements. The ability of employers and employes to meet thus for the consideration of mutual interests is already well-proven. The annual conference between employers and employes in the bituminous coal fields of Illinois, Indiana, Ohio and Pennsylvania is the battle ground wherein are fought out the questions of wages, hours and conditions of labor, and upon the decisions of the conference the entire industry rests. Each side learned respect for the other, and the petty and often recurring grievances so common in other trades have well-nigh disappeared. It it quite impossible to predict the outcome of such a mutual insurance scheme as is here contemplated, but it is safe to assume that it would accomplish wonders in the industrial progress of the nation.

IMPORTANT DETAILS.

Under the various insurance schemes already in operation the qualifying period has been set at different places. Many minor accidents occur, which while disagreeable and interfering to some extent with a man's employment are not of a sufficiently severe nature to cause any great loss. It has already been noted that many establishments employ the services of competent surgeons, who render prompt assistance in case of these minor accidents. Many employers, in addition, instruct their men in giving first aid to the injured, and thus the serious tendencies of the small cuts and bruises are greatly averted. It would be quite an impossibility for an insurance organization to take cognizance of these minor injuries, and it is for this reason that a qualifying period is established. Under the German system thirteen weeks must intervene between the occurrence of the accident and the taking over of the injured man into the care of the accident association. During the interval, however, the man is assisted by the sick relief associations, to whose funds he is a contributor.

The qualifying period under the British Workmen's Compensation Acts is two weeks, and various efforts have been made to reduce it. The argument in favor of such reduction is that employers are as little able to tide over a short period of disability as a longer one. The period established by Friendly Societies and Trade Unions of three or four days, or another arbitrary one of a week, is suggested. The objection is raised, and not alone by employers, that even the two weeks' period leads to some degree of malignering on the part of injured men, who often stop work with a slight injury and lay off for the two weeks in order to get a rest on the insurance pension. A shorter period would, of course, increase this tendency. Another suggestion is that the qualifying period remain untouched, but that compensation be paid for the two weeks, after they have passed. In answer to circular letters regarding the additional cost of insurance if the qualifying period were abolished, if it were reduced to one week and if it were left untouched, and compensation were dated back to the injury, insurance companies gave the following replies: in the first case, premiums would be increased from 25% to 50%; in the second, from 25% to nearly 50%, and in the third from 30% to 40%. In the light of the evidence introduced the departmental committee of investigation refused to recommend any change.[1] In such a matter as this, English experience is the best guide for American efforts.

The matter of the ratio of contributions to insurance funds is one which can be determined only after a close and rigid examination into the amounts of compensation, the cost of administration and the financial status of the employes in the particular industry. No abstract principle can be evolved stating that a certain ratio will engage the interests of employers and employes to the maximum degree demanded by the situation. It would seem that the employes' contributions should bear a definite relation to the amount of compensation actually paid, rather than to the total of funds collected. In as much as they possess the superior business ability employers should assume the entire cost of administration as the best preventive of administrative excesses and abuses. Germany is, of course, the best source of information on this point; a careful analysis of her sick, accident and old-age relief associations would give a good basis for the beginning in this country.

One of the greatest arguments urged against a change in the compensation system in this country is the high awards often made by juries in individual cases, $1,500 for a single finger; $7,500 for burned hands; $15,000 for total incapacity: such verdicts would seem to indicate the ability of injured men to obtain indemnification adequate in amount to their greatest needs. But these are only a few—a very small percentage—of the total number of cases for the remainder of which compensation is small or nothing. And, too, most of the large verdicts are obtained only after long and protracted as well as costly, litigation, which cuts down sometimes as much as 75% the amount finally received by the plaintiff. Quite often, too, settlements are made after the verdict is announced on a much smaller basis. Reference to the table of damage suits, the amounts claimed and the amounts awarded in and by the courts of Cook county, Illinois, is indicative of the tendency current among lawyers to set their claims high on the hope of obtaining a greater verdict as a result of their large demands. From April 21, 1093, to January 1, 1904, claims aggregating $3,636,000 were made against the city of Chicago in personal damage suits. Judgments were entered to the amount of $192,348, averaging thus $68.51 per case, or 5.29% of the claims. When it is considered that most of these cases are in the hands of attorneys who expect a fee of at least 50%, it is apparent that the balance remaining to the plaintiff is less than 2.5% of his original claim.

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[1] Report of the Departmental Committee appointed to inquire into the law relating to Compensation for Injuries to Workmen, Vol. I, pp. 72 76. London, 1904.

A basis of comparison of awards under different systems with those in the United States is not to be found. Averages are of no avail unless derived from a sufficiently large number of similar data in each case. In the various estimates of average awards made to injured employes in the United States only a small number of the injuries actually occurring are generally recorded. Insurance company figures are difficult to obtain, becuse to the casual observer their small amounts have a repelling effect. The average payment per case of death and disability made by the Baltimore & Ohio Relief Department for the fiscal year 1902 was $20.30; for the period 1880–1902, $21.98. The average amounts of certificates issued for the payment of benefits by the Philadelphia & Reading Relief Department during the year ending November 30, 1902, were: for death from accidental and natural causes, respectively, $531.34 and $510.57; for accidents and sickness, respectively, $18.32 and $20.11. In comparison with the scale of benefits payable these amounts seem very small, but they include all cases, those of one extreme as well as those of the other. A similar estimate is that of the German accident insurance associations, which disbursed in the first ten years of their existence an average of $32.25 per case coming under their jurisdiction. On account of the relatively low wages of working people in Germany, this would equal, perhaps, twice that amount when transferred to the American standard of wages.

In all the cases so far cited the maximum death benefits are reasonable. The railway relief departments pay to the amount of $5,000 in extreme cases. The maximum death benefit under the German system is $1,328. But the maximum awards under the present employers' liability laws are much in excess of those obtainable under any other system. What, then, should be the basis of equitable compensation? The judgments claimed in a number of cases under the personal injury law are cut, by jury, court, and attorney on the average of 94%. In a fairly typical review of 281 serious personal injury cases the average amount actually received by the injured parties approximated $342.00. Of 209 cases of death among the employes of the Philadelphia & Reading Railroad the average payment was $520. Is it not evident, then, that the large damages liable to award under the law of employers' liability are not determined by their value to the plaintiffs but by the difficulty of obtaining the full amount asked for? It represents in another phase the rottenness of the system.

Certainty and reliability demand that the payment of indemnification be on a definite basis of definite awards for definite injuries. In no other way can satisfaction be secured. A system which promises "adequate" compensation for all injuries will be enrapt many times over in the multitude of disputes engendered by dissatisfied workmen. Such has been the acknowledged effect, and certainly the gravest defect, of the Workmen's Compensation Acts of England. Though the use of the courts has been somewhat limited, and confined to questions involving the interpretation of the acts, arbitration has assumed immense proportions. While not involving the great expense of litigation, arbitration becomes a source of annoyance and of financial drain whenever the terms on which settlements are effected are not sufficiently explicit to be understood by everybody, and in advance. The certainty created by a system of definite awards justifies their establishment on the smallest basis of reasonable relief. In extreme cases, the injured person may not receive the fullest indemnification in accord with his needs and the nature of the accident, but on the average, when all injuries are considered, the results will be far more satisfactory. The certainty of compensation is worth a great deal to the working population, which amount it is no more than proper to allow those who guarantee the certainty to deduct from the awards. Benefits should be based on the earnings of the injured man immediately preceding his accident and on the degree of disability occasioned. The German system becomes again in the establishment of compensation schedules a model for American effort to pattern after.

It is impossible to imagine, nor is it to be desired, a system so perfect in its every detail as not to give rise to questions of debatable properties. Differences of opinion as to the merits of individual cases are bound to arise, and the system established must take cognizance of this act in its organization and arrange the suitable means of settling disputes. This much is certain: the entire question must be taken from the hands of the courts and the legal profession and given over to authorized bodies existing for this specific purpose. The problem is large enough to warrant specialization in its interests. Arbitration boards, and boards of appeal, which will lean no more to the one side than to the other are the effective means of affording settlement in cases of dispute. These may be maintained as district organizations, being supported conjointly by the associations of different industries, and at the lowest expense compatible with the high grade of intelligence and integrity which must characterize them.

Although designed to do away with the evils of compensation under the law of employers' liability, this scheme in no wise restrict workmen from recourse to civil process, if they so desire. Contracting out of the benefits of protective legislation is held in England and the United States as contrary to public policy, and as will subsequently be seen it is the expression of public opinion in statutory enactments which alone can bring about the inauguration of this scheme. However much it is to be desired for other reasons that labor learn to look to such a scheme, and to it alone, for assistance when incapacitated for work, it is not just to force him to decide before injury to which of two sources of relief he shall apply. But justice to the employer demands that the amount of his payments to the injured man through the medium of the insurance fund be deducted from such civil award as may be made. As long as the state prescribes the means of indemnification it is the province of no one else to declare arbitrarily that these means shall not be employed. It must be the hope, however, that the scheme under contemplation will on the whole offer better advantages than recourse to law.

ECONOMY.

The system of compensation contemplated in these pages is analogous in many respects to the German system, the differences which are found being due to the different social, economic, and political conditions of this country. It now becomes necessary to consider the efficiency of such a system and if possible to determine the relative efficiency of that system and the one referred to in these pages as the system of employers' liability. By efficiency is meant the relations which the total of compensation paid bears to the total expense of compensation.

In an investigation of the relative efficiency of the German accident insurance system and the American employers' liability system it is impossible to attain to any great degree of accuracy. As far as the former is concerned, complete and accurate statistics of operation are easily obtained; the system is so centralized and so scientifically managed that results are obtainable to their minutest details. Such is not the case, however, with the system employed in this country; it is only in the most general sort of a way that the various figures can be obtained to throw light on the situation. Dangerous as such comparison becomes, then, it is believed possible to arrive at some general conclusions in regard to the relative efficiency of the two schemes.

For the purposes of this investigation the figures of the German Accident Insurance[1] for the year 1902 are taken, and of Employers' liability insurance and industrial insurance in the United States,[2] for the year 1903.

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[1] Guide to the Workmen's Insurance of the German Empire, Revised Edition brought up to date for the Universal Exposition at St. Louis, 1904.

[2] Insurance Year Book, 1904. Pub. by The Spectator Co., N. Y.

Country.	Total receipts. I.	Compensation Paid.		Administration.		Surplus or Profits.	
		Aggregate. II.	Per cent. of receipts. III.	Aggregate. IV.	Per cent. of receipts. V.	Aggregate. VI.	Per cent. of receipts. VII.
United States	$111,535,223	$33,015,828	29.5	....	58.1	....	12.4
Liability insurance	13,571,733	5,607,637	....	....	... .	....	....
Industrial insurance	98,063,490	27,408,191	....	....	....	....	.....
Germany	35,348,525	27,033,275	76.4	$4,165,950	11.2	$4,149,300	12.4
Germany to United States—percentage	31.6 per ct.	78.5	....	....	....	....	....

The amounts in the first two columns above represent for the United States the total premiums paid and the total losses paid; for Germany the total contributions to the insurance funds and the disbursements for compensation. The fourth column represents for both countries the aggregate devoted to administration expenses; no figures are obtainable for this item in the United States. The sixth column represents for the United States the amounts of premiums withheld for the creation of surplus funds and distributed among stockholders in the form of profits; for Germany, the amount set over to the credit of surplus funds, which aggregated in 1902, $49,798,575. The percentages in V and VII for the United States are calculated by equating that in VII to the German percentage in the same column. It is believed that this figure, for liability insurance at least, is no more than 7 or 8, but for purposes of comparison that adopted is small enough.

The efficiency of the two systems is displayed in column III: that of the American system being 29.5, and of the German 76.4. Comparison of these two figures reveals the fact that the latter is 2.55 as efficient as the former; that is to say, given equal amounts of premiums, the latter will return in the shape of compensation $2.55 where the former will return $1.00. Looking now at the ratio of German returns to American, it is seen that the German people accomplish 78.5% of the accident insurance that the American people do at a cost to the insurers of 31.6%. The wage-earning population in the two countries is approximately 14 and 20 millions, or the German is 70% as large as the American. On the basis of equal population the German nation expended for the insurance of her working people against accident 46c to the dollar expended for the same purpose in the United States; but to the single dollar received by working people here, $1.12 was received there.

So much for the efficiency of the two systems; what becomes in either case of the balance of receipts over and above expenditures for compensation. In Germany the surplus funds aggregated by the insurance associations have been turned to almost every conceivable form of advantage to the laboring population generally. Model tenements have been constructed and free dispensaries and hospitals have been opened to the public. In this country an equal amount has gone into the pockets of people scattered variously over the country, and has been turned to none of the useful purposes which characterize the German surplus funds. But the greatest disparity in the two systems is seen in column V. The difference in the cost of operation and administration between the two systems is 46.9%: nearly 60 cents of every dollar paid for insurance in the United States is devoted to the operation of the insurance company, which amount in Germany is paid to the persons insured. And what does this mean? The first and minor inference is that higher salaries are paid officials. The second, and important consideration is that a small army of solicitors and collectors are required to do the work performed gratuitously and with practically no effort by German employers—what expense is thus made them is counteracted by the better relations which exist between them and their employes. A considerable portion of this 60 cents further represents a direct economic waste, since it goes to support a class of men performing no economic function, properly speaking.

This investigation has not attempted to consider the various other means of compensation employed under both systems. It is safe to assume, however, that the efficiency of union, mutual aid, permanent relief funds, and the like, is the same in both countries. What has here been shown is that the one system far surpasses the other in its significant features. It has not been considered that the German system applies to practically all trades and pursuits, including agriculture and forestry, and to small as well as large establishments; the greater part of the liability insurance of this country is carried by large establishments, and industrial insurance has not extended over the less dangerous pursuits. As one court is balanced off against another the conclusion becomes only more evident that the greatest economy and efficiency in compensating labor for industrial accidents is found in institutions organized and administered by employers, providing insurance at cost, and putting the same in the hands of all emplcyes.

CHAPTER VI.

THE METHOD OF REFORM.

In the last chapter it was attempted to denote the principal lines to which should be bent the efforts to reform the present systm of compensating labor for the losses which it sustains as a result of industrial accidents. A scheme has been advocated, which, though extremely visionary in so far as is concerned its immediate adoption, if taken up in the proper spirit by society in all its branches will tend to alleviate the needful suffiering of the laboring population as well as the unnecessary pain and privation, which have developed with the growth of industrial civilization. Though not defended absolutely on the ground of practicability, it is nevertheless urged that ideas embodied in this scheme are essential to the eradication of a great and crying evil and only by careful consideration of them can it be hoped to accomplish the needed reforms. In many respects out of accord with the traditions, customs and habits of the American mind, they constitute nevertheless a definite goal, which if reached will demonstrate its fitness to have been the cause of any efforts that may be expended. It is difficult to conceive of any other arrangement that will accomplish the results desired and soon to be demanded, if the opinion of students of the subject is to be given credence. And surely human activity is more effectively expended with a definite end in view, be that end ever so far distant.

It is one thing to sense an evil; it is a totally different thing to eliminate that evil even when the agents are at hand. This problem in particular is one that does not permit of easy or rapid treatment. The financial interests of the well-to-do and the wealthy seem too closely allied with its solution to permit them to undertake the steps necessary to obtain justice for the poorer and less able classes. The independence felt by labor in its relations to capital is a bar to the workman's conversion to the belief that he not only needs but deserves the assistance of his employer. It is not the laboring man today who feels the injustice of the operation of employers' liability laws; though he may realize it, the employer is not ready to admit the evils which a limited civil liability to his injured employes keeps ever alive; the general and consuming public are too busy to notice the straits into which workingmen are so often cast as a result of the progress of civilization, or if they do perceive it in individual cases seldom realize the full extent of the loss occasioned thereby. The importance of the problem of compensation for industrial accidents has as yet been felt scarcely at all beyond the circle of those who make it their business, or pleasure, to interest themselves in the bettering of the conditions which seem to demand attention. The European mind has already taken the matter firmly in hand and is today in a position to offer positive advice of a helpful nature to those who are dissatisfied with conditions in the United States. The German trial of the new belief has stood the test of twenty years' successful operation; England is finishing her sixth year of compulsory compensation for *all* accidents. But while this movement has been going on abroad, the United States has stood practicall still. The same evil exists in this country that brought forth the reforms abroad; in these pages has been considered a manner of dealing with the problem which must sooner or later be faced, tentatively, if not absolutely, satisfactory to the needs of the case; it now remains to set forth the method of reform which alone seems capable of accomplishing the desired ends.

European nations have enjoyed a great advantage over the United States in their efforts along the lines of economic and social betterment. Abroad, the sphere of the state is wide enough to include the initiative in the matter of social legislation; here, active state interference in such matters is out of the question. The difference in the methods to be employed in accomplishing anything such as herein proposed in this country and in Europe is greater than at first sight may be supposed. Theoretically, legislation under a limited form of monarchy voices the wishes of the people; but it may go beyond what the people demand. The rank and file of German citizens were in no wise prepared to sustain unqualifiedly the proposition laid before their representatives by the emporer in 1883, but the persuasion of those to whom the authority had been entrusted proved an easier task than would have been the persuasion of those who conferred the authority. And the expression of opinion, after the persuasion was complete, was final.

It is not proposed to use the state as a means of obtaining reform in this country. The only remedy available, aside from the action of the people's representatives, is the action of the people themselves. The strength of public opinion must be appealed to if positive results are to be obtained within a reasonable length of time. It can scarcely avoid being inevitable that if sufficient time be given employers they will come to an active realization of the futility, as regards their own interests, of longer insisting on what is manifestly barbarous and inhuman. But it is not right to leave the matter in their hands, if by so doing a continued wrong is allowed to work itself on society. Upon those who feel the necessity of reform, falls the duty of endeavoring to accomplish it. They must seek the remedy. But the legislative halls are not their fields of operation: the only weapon that offers for prompt action its sharp and resistless blade is public opinion. The voice of the people must be made to call for a betterment of conditions; employers, in their endeavor to retain the good graces of the consuming public, will be obliged to conform to the wishes expressed.

The course of public opinion, however, is slow and subject to fits and starts. Its attention is too easily diverted from the channels into which it is directed, and before its course is regained the progress previously made is often lost, unless held rigidly by a fostering and alert hand. That which legislation brings about is accomplished once for all; the passage into law of an act of legislation is a finality, which requires an equally definite act to accomplish its repeal. The difficulty encountered by public opinion in its efforts to move any reform may be likened to the trouble experienced by the man who is attempting by means of a hand derrick, so constructed as not to be braked effectually, to lift a heavy stone. Until his strength begins to fail him he is able to keep up a steady revolution of the crank and the stone slowly but steadily rises. But gradually he tires, the ascent of the stone becomes irregular, and finally he is obliged to set the brake in order that while he rests he may not lose all that he has gained. But the brake is defective and gradually the stone slips back to its initial position on the ground. Though he perceive this tendency, the attention of the man is directed to regaining his strength and he is powerless to stop it. Soon, however, he is refreshed and for a time is able to make progress as in the first place. But when he again tires and rests the stone gradually recedes from the position which it has gained. At length, after many trials and the expenditure of considerably more effort than the distance he desired to elevate the stone seemed to necessitate, he accomplishes his object. From a position on the ground the stone has been raised twenty feet in the air. But if he desire it to remain there he must place beneath it a permanent support lest otherwise it gradually slip back again.

The analogy, if not already so, is soon apparent. The stone, which is to be moved, is not only belief in compensation for all accidents but also the institution of a proper scheme for insuring that compensation. The distance which it is to be moved is from a position where the belief is entertained by the few who have made its propositions a matter of study to that where it is eagerly accepted as an all-important truth, and where the institution of an effective relief scheme is an accomplished fact. The man who seeks to elevate the stone is public opinion, and his declining strength is as the force of the people's sentiments toward one matter when its attention is being detracted toward others. The derrick is the natural tendency of producers to cater to the wishes of consumers, and as the intensity of public opinion increases or decreases so the derrick performs its mechanical purpose of creating the proper adjustment between cause and effect. Lastly, the defective brake may be likened to the tendency on the part of all men who are being artificially supported against their will to fall back into their old habits as soon as the tension is relieved; it represents the efforts of many men to avoid the expenditure of all that which they feel will create a loss when gone.

In order to complete the analogy it is necessary to consider the operator of the derrick not only as one ignorant of the mechanical means of completing the efficiency of his machine, but also as one unable to obtain the knowledge or assistance necessary to fully brake the derrick. It must be considered, even, that the defect is to be remedied neither by himself nor by any human power. For the trait in the character of mankind to which is likened the defective brake is so inborn and deep-rooted as to make worse than futile the attempts of any who would dislodge it.

It has been granted that after some time the man accomplished his purpose and had the stone in the position wherein he started to place it. In the analogous case this supposition could hardly be made, for the desire of man to conform to the dormant behests of public opinion is extremely difficult to figure on as a positive quantity. In nine cases out of ten the return to the original position would be more rapid by far than the steady advance which had ceased; and if the question of compensation from the standpoint of employers in the United States be judged from that of European, and particularly English, employers, it is safe to say that it involves all the accumulated difficulties of the nine that oppose the one. If his machinery were as defective as that of its analogy, the operator must have had at hand a ready and strong prop with which to sustain at every stop the suspended stone, and it is more than probable that he had an assistant who placed the support before he relaxed his energies.

But the difficulties that presented themselves to the tiring operator were small as compared with those which confront the economists and sociologists, who as the heart and soul of public opinion seek to avoid the loss of what temporary advance they may have made. He has many objects with which to construct a prop; they have but one. He has at hand loose and otherwise worthless material, perhaps, in the shape of old lumber, bricks, stones, scantlings, etc.; they have only the extremely unwieldy tool which legislation offers. In as much as law represents the combined will of the people by whom it is enacted, even so the expression of popular will is ground for the creation of new laws. But the need or the demand for legislation is not always closely followed by legislation. The paths of law-making are dark and winding and need persistence to be followed successfully. Hence the difficulty of increasing step by step the civil liability of employers, as they themselves, bowing to public opinion, recognize the justice of such increased liability and release their efforts against any amendments of existing laws, is extremely great. Arduous, however, as the method is, it is the only manner in which can be accomplished in the United States the needed reforms.

The ultimate result of thes uccessful operation of the method of reform suggested in the analogy is easy to see. When public opinion is once aroused and starts on its fitful task of obtaining justice, each successive increment added to its support by the acts of legislatures gives a new and fresh foundation on which to work. For legislation then, as now, is the basis on which the problem rests. Gradually, as public opinion advances, legislation will outgrow its former bounds and will soon reach a position previously untenable in the popular mind. The extreme to which, in this case, such a movement would tend is naturally compulsory federal insurance, in as much as that form of compensation includes these advantageous qualifications which justice in the matter of indemnification demands. Public opinion would then accord the federal government greater authority than is now the case.

Socialistic, and socialistic in the extreme, this doctrine may appear, but what is in a name? Is it less socialistic than many of the advances that the state has made in the last century in the matter of interfering with private and corporate rights? The *laissez faire* doctrine of the eighteenth century would as little have countenanced government interference in the handling of mail and would have branded such a proceeding as Socialistic, had the name at that time been in use. It has grown to be too much of an habitual occurrence in this day and age to brand everything that savors of progress as Socialistic; the bubble will break sometime and those who call themselves conservatives will be obliged to seek new pretexts for impeding social reform. It is not the purpose of this work to advocate the principles of Socialism; the writer is too firm a believer in the ability of the American people to work out each and every encountered problem peacefully, rationally, and without an overthrow of the existing order of things. But he believes, as well, that there is ever present in the lives of all men in every place and at all times a force which impels them unwittingly to change, and keep ever changing, their views on matters which confront them. This world was not accomplished in a day, nor will it be changed in a year. Our present civilization is a result of a constant building-up process, that bases itself in each succeeding era on the experience of the past; that has been in progress since the human mind was first evolved, and that will continue to exist until man has departed this sphere. Evolution is one of the greatest agents of civilization that has been discovered. Deny the claims of evolution, and man is placed on the level of the beast that lives his day and passes off leaving no heritage to posterity in the shape of mental, moral and social development. On the experience of the past man builds for the future and therein lies the salvation finally of humanity. The process is slow and gradual, but with the broadening of experience man's attitude changes, and it is often easier to under estimate than to over estimate the end.

Before passing on to a further consideration of methods it is interesting to note one more illustration of the analogy above drawn. Let it be supposed that the operator had it in his power to concentrate the entire energy at his disposal for this task, as well as the efficiency which the machine was to lend his efforts, and that in one single, instantaneous move he lifted the stone to the desired position. In such a case his effort would be like the single act of legislation, which in a single measure encompasses the most extreme ideas of its enactors and without delay creates the desired remedy. The impossibility of such an occurrence in the one case as in the other is proof of the futility of endeavoring by any means but by the education of public opinion to obtain definite and conclusive reform in the manner of compensating workmen for industrial accidents.

The question of methods now resolves itself to the effective manner of arousing public opinion. It is needless to say that until the public becomes fully conscious of the presence of this evil it can not be expected to commence its extermination. Several lines of action present themselves as well calculated to bring the matter in all its details before the public eye. The extension of factory and work-shop legislation in the directions already taken will tend to give great prominence to the ever present danger of industrial accidents, and can be made to present some idea of the loss and suffering occasioned thereby. The several states should consider this one of their best fields of activity for the accomplishment of a needed and lasting benefit to the people.

As the matter stands today, the actual knowledge, among those who are interested in social betterment, of the real conditions and circumstances of industrial accidents in the United States is disgracefully meager. This fact has been dwelt upon at some length in an early part of this work, but an example taken from before our very eyes is not amiss at this point. In its biennial report, of which this paper is a part, the Wisconsin Bureau of Labor Statistics publishes statistics of accidents in the state for the year ending July 1, 1904, and embracing 140,800 workmen. The investigation of this bureau shows that of the entire number of workmen 18 were fatally, 43 permanently, and 1,156 temporarily injured as a result of industrial accidents. This bureau is the one institution in the State of Wisconsin best able to conduct such an investigation as this, and the only one upon which any authority in the undertaking might be bestowed. But under existing conditions, of what value are the results which it presents to the state? They are hardly worth the paper on which they are printed from the standpoint of their ability to convey a comprehensive impression of the actual human loss to the state occasioned by industrial accidents. Simultaneously with the printing of this report a meeting of the legislature is being held, before which several measures of reform in the law of employers' liability are presented. The question is not to be avoided; can the representatives of the people of this state take intelligent action on a matter of such importance as this without a greater knowledge of the facts and conditions which their decision is to affect? Energy directed to obtaining comprehensive legislation today is misdirected, and can be effective only by a miracle.

The State of Wisconsin, and every state in the union, should empower, and insist upon the carrying out of its purpose, its bureau of labor and statistics to collect all reasonable data relating to accidents within the state. The police power of every state is surely large enough to compel employers to keep accurrate and full accounts of the circumstances connected with accidents in their establishments. These accounts should record the nature of the accident, number and names of the injured, extent of their injuries, conjugal state and number of dependents of the injured, length of time incapacitated for work and the total of wages lost as a result of the injuries. These accounts should be kept open to the bureau of statistics and should be sent to the secretary of the bureau upon request. It is necessary, though, for the protection of individual employers from blackmail and from the effects of public opinion that these reports be considered confidential and that they be given to the public only in the aggregate for all establishments. Such a compilation, thoroughly and systematically made, would reveal to all interested the true nature of the case and would afford a scientific and intelligent basis for comprehensive legislative action. Such a compilation, showing the causes of accidents, might well serve to guide preventive legislation along the lines of greatest need and utility. Less today than ever before are prudent men inclined to venture blindly into new fields; little hope can be entertained for reform in this matter until the facts are established.

It would not be well to bring this work to a close without a word as to the attitude taken by the workingmen towards relief of any sort that emanates from his employer in whole or in part. There is undoubtedly a deep-seated aversion on the part of laboring men to avail themselves of benefits of this nature. Their attitude is that if employers find themselves financially able to expend any extra sums in the interests of their men they should do so through the regular channels of higher wages and shorter hours. This feeling is often entertained with regard to the distribution of gifts at various times of the year. The Christmas turkey presented by the employer is not eaten with the same gusto and savor of cheer that accompanies the bird purchased with the regular wages. The independence of the American people may be responsible for this feeling; but there seems to be a deeper significance to its general acceptance.

It is not long since the doctrine of the wage fund, as an economic truth, was permanently exploded. It is no longer considered that there is in a community at a certain time a fixed amount of wealth to be distributed in the shape of wages, and that the specific portions which individuals are to receive vary in accordance with the increase or decrease in the number of the wage earners. In the trained and more intelligent mind the fallacy of this doctrine is apparent. But is it not possible that a remnant of this belief still continues in the thought of the toiling masses to misguide them in their attitude toward their employers? The evident aversion of labor to accepting gratuities from employers would seem to indicate that it has not yet grasped the truth of the fact that the prosperity of nations is reflected fully as much in their consumption of commodities as in their production, and that the welfare of the laboring population is not dependent upon a single fund which is devoted to its maintenance. Labor and capital must both come to a realization that compensation for industrial accidents is an item distinctly apart from wages; that society feels its debt not because labor may be underpaid but because it is, through no fault of its own, overtaken by adverse circumstances which are beyond its means to regulate.

This work has attempted to deal with a difficult and complex problem, and claims consideration not on its statistical but on its suggestive merits. The problem of compensation for industrial accidents is daily assuming greater importance in the public mind. The reviews herein attempted of experience under various systems and the suggestions as to the manner and end of reform in this country are in no wise comprehensive, but it is hoped that they will prove of value in starting and directing intelligent thought on the subjects which they cover. Employers' liability in its present form is doomed: the American people will not much longer submit to the abuses which characterize it. But before attempting reform of any kind it is helpful to learn of the experience of others in the same field. Germany and England are the sources from which to draw inspiration for action here and use of their experience should not be sparingly made. The United States has been confronted from its birth with problems of momentous perplexity and it can not be said that they have not all been squarely faced and solved with rare ability and on just grounds. It is but a question of time when the problem of compensation for industrial accidents will have received an equally thorough and satisfactory treatment, and the prosperity and happiness of the nation will have received an added stimulus.